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FM 7-20

WAR DEPARTMENT FIELD MANUAL

INFANTRY BATTALION

WAR DEPARTMENT • 1 OCTOBER 1944

CHANNON, R. I.

WAR DEPARTMENT FIELD MANUAL
FM 7-20

This manual supersedes FM 7-20, Rifle Battalion, 28 September 1942, including C1, 27 March 1943.

INFANTRY BATTALION

WAR DEPARTMENT *1 OCTOBER 1944*

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(For explanation of symbols, see FM 21-6.)

CONTENTS

		Paragraphs	Page
CHAPTER 1.	**General.**	1-2	1
CHAPTER 2.	**Battalion commander and staff.**		
Section I.	Battalion commander	3-6	5
II.	Battalion staff and staff duties	7-23	6
III.	Troop leading	24-29	17
IV.	Staff records, reports, and maps	30-36	22
V.	Command post	37-45	24
CHAPTER 3.	**Battalion headquarters company.**		
Section I.	Company headquarters	46-51	29
II.	Battalion headquarters section	52	32
III.	Communication platoon	53-57	32
IV.	Ammunition and pioneer platoon	58-61	36
V.	Antitank platoon	62-68	38
VI.	Security	69-73	41
CHAPTER 4.	**Battalion medical section.**	74-81	44
CHAPTER 5.	**Administration.**		
Section I.	Battalion trains	82-84	47
II.	Supply	85-95	47
CHAPTER 6.	**Troop movements and security on the march.**		
Section I.	General	96	60
II.	Day marches	97-103	60
III.	Night marches	104	70
IV.	Motor and rail movements	105-106	71
CHAPTER 7.	**Bivouacs.**	107-111	75
CHAPTER 8.	**The offensive.**		
Section I.	General	112	81
II.	Approach march	113-125	81
III.	Assembly areas (positions)	126-129	93
IV.	Types and methods of attack	130-132	96
V.	Reconnaissance, plans, and orders for an attack against an organized position	133-140	100
VI.	Conduct of the attack	141-148	116

CONTENTS (Continued)

		Paragraphs	Page
VII.	Reserve battalion	149-154	132
VIII.	Night attack	155-159	135
IX.	Attack in woods	160-163	151
X.	Jungle warfare	164-168	156
XI.	Attack of towns	169-172	158
XII.	Attack of a river line	173-189	162
XIII.	Attack of a fortified position	190-194	175
XIV.	Raids	195-199	179
XV.	Beachheads	200-205	185
CHAPTER 9.	**The defense.**		
Section I.	General	206-208	189
II.	Front-line battalion	209-226	190
III.	Reserve battalion	227-233	226
IV.	Defense on a wide front, in woods, in towns, and of a river line	234-238	231
V.	Defense against air-borne operations	239-241	238
CHAPTER 10.	**Retrograde movements.**		
Section I.	General	242	242
II.	Daylight withdrawal	243-247	242
III.	Night withdrawal	248-255	247
IV.	Delaying action	256-261	252

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Chapter 1
GENERAL

1. ROLE OF THE INFANTRY BATTALION. The battalion is the basic tactical unit of Infantry. It usually operates as an element of the infantry regiment. Its mission is assigned by the regimental commander, and its actions are coordinated with those of other units of the regiment. Exceptionally, the battalion may be detached from the regiment to perform an independent mission. It has administrative functions.

2. COMPOSITION. The battalion consists of a headquarters and headquarters company, three rifle companies, and a heavy weapons company. Medical personnel and nonorganic transportation are attached. (See fig. 1.)

a. Battalion headquarters and headquarters company. (1) The headquarters consists of the battalion commander (a lieutenant colonel) and certain members of his staff.

(2) The headquarters company consists of company headquarters; a battalion headquarters section; a communication platoon; an ammunition and pioneer platoon; and an antitank platoon.

(3) See figure 2 and Table of Organization and Equipment No. 7-16.

b. Rifle company. Each rifle company consists of a company headquarters, three rifle platoons, and a weapons platoon. (See T/O and E 7-17.)

c. Heavy weapons company. The heavy weapons company consists of a company headquarters, two caliber .30 (heavy) machine-gun platoons, and an 81-mm mortar platoon. (See T/O and E 7-18.)

d. Attachments. For operations, the battalion section from the regimental medical detachment joins its battalion. (See FM 7-30 and T/O and E 7-11.)

NOTE: For definition of military terms not defined in this manual, see TM 20-205.

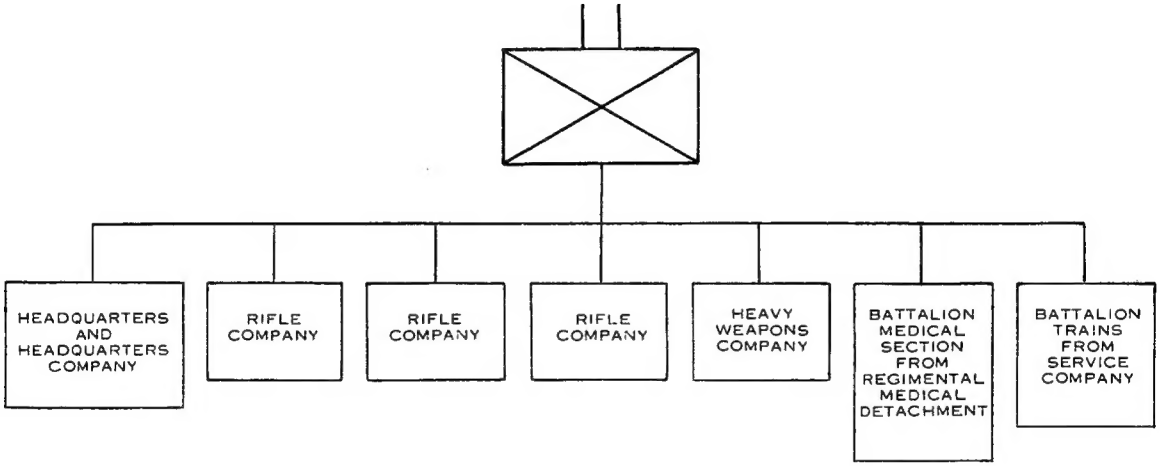

Figure 1. Infantry battalion.

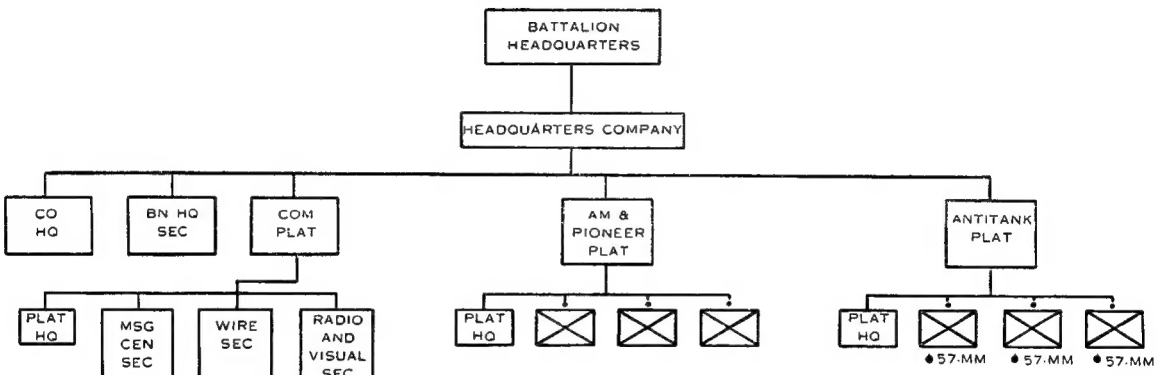

Figure 2. Headquarters and headquarters company, infantry battalion.

e. Motor transport. (1) Organic motor transport of the infantry battalion consists only of the company transport of its component elements. (See FM 7-30 and Tables of Organization and Equipment.)

(2) The battalion trains are an integral part of the regimental trains. They include kitchen and baggage, ammunition, and maintenance vehicles organically assigned to the service company, and medical vehicles organically assigned to the medical detachment. In operations, and when the battalion supply echelon is operative, the battalion section of the service company transportation platoon (regimental trains) joins its battalion, except for those elements which may be retained under regimental control.

Chapter 2
BATTALION COMMANDER AND STAFF

Section I
BATTALION COMMANDER

3. GENERAL. *a.* Aggressiveness and the ability to take prompt and decisive action are prime requisites for a successful battalion commander. By these qualities he inspires confidence. By his boldness, energy, and initiative he influences both individual and collective conduct and performance. For principles of command and leadership, see FM 100-5.

b. The battalion commander is responsible to the regimental commander for the condition and operations of the battalion. He meets this responsibility by anticipation; by timely decisions, plans, and orders; and by supervision of execution.

c. In preparation for combat, the mission of the battalion commander is to bring his unit to a high state of combat proficiency. He subordinates administration to training. He encourages initiative, ingenuity, and aggressiveness among his company officers. Having indicated his policies and given his orders, he allows his subordinates maximum freedom of action in order to foster self-reliance and initiative. He supervises the carrying out of his orders.

d. The battalion commander must make his authority felt by each individual of his battalion. He exercises his authority by means of instructions, orders, inspections, and personal supervision.

4. RELATIONS WITH STAFF. The battalion commander makes all major decisions for the operation of the battalion. He is provided with a staff to relieve him of details, to act as his agents, to prepare detailed orders, and to assist in supervising the execution of these orders. He must make full use of his staff in order that he may devote himself to his more important command duties.

5. RELATIONS WITH SUBORDINATE COMMANDERS AND TROOPS. The battalion commander deals with his subordinate units primarily through their commanders. He must not interfere with the command responsibilities of the latter, except in emergencies. He makes inspections and informal visits to his units during which he talks to individuals and to groups. In combat, such visits promote confidence, respect, and loyalty. They give the commander first-hand knowledge of the tactical situation and of the needs and capabilities of his units.

6. RELATIONS WITH COMMANDERS OF SUPPORTING UNITS. When field artillery (usually a battalion of 105-mm howitzers) is placed in direct support of an infantry regiment, an artillery liaison officer, assisted by a liaison section, is sent by the artillery battalion commander to remain with each supported battalion. The liaison officer acts as artillery adviser and assists the infantry battalion commander in obtaining supporting fires. (See par. 21.) Elements of other units, such as the regimental cannon and antitank companies, engineers, chemical troops, medical troops, tank, tank destroyer, and truck companies, may *support* or be *attached* to the infantry battalion. Liaison is maintained by supporting units through their commanders or representatives who report to the battalion commander and maintain contact with him. Units *attached* to the battalion become a part of the battalion commander's command.

Section II
BATTALION STAFF AND STAFF DUTIES

7. COMPOSITION. *a.* The battalion unit staff consists of the following:

(1) Executive officer (second-in-command).

(2) Adjutant (S-1) (company commander, battalion headquarters company).

(3) Intelligence officer (S-2).

(4) Operations and training officer (S-3).

(5) Supply officer (S-4) (from the service company).

b. Certain officers who are charged with technical and administrative duties, and who are commanders of subordinate, attached, or supporting units, have staff duties as advisers to the battalion commander and staff in matters pertaining to their specialties in addition to their primary duties of command. Such officers are—

(1) Battalion motor transport officer (second-in-command, battalion headquarters company).

(2) Company commander of the heavy weapons company.

(3) Antitank officer (commanding battalion antitank platoon).

(4) Communication officer (commanding battalion communication platoon).

(5) Platoon leader of the battalion ammunition and pioneer platoon (battalion munitions and gas officer).

(6) Surgeon (commanding the battalion medical section).

(7) Commanders of attached units, such as regimental cannon, artillery, tank, antitank, engineer, or chemical units.

(8) Artillery liaison officer (from an artillery battalion in direct support).

(9) Liaison officer from adjacent units.

8. ORGANIZATION OF BATTALION HEADQUARTERS FOR COMBAT. The battalion command group should be so organized that it can function continuously, day and night, throughout an operation. To this end, staff officers are trained to perform the duties of other staff officers. (See par. 42.) Each staff officer keeps brief notes to enable him to inform the commander, or other staff officer, of the situation.

9. EXECUTIVE OFFICER. *a.* The executive officer is second-in-command and principal assistant of the battalion commander. He performs such duties as are delegated to him by the latter.

b. The executive officer usually remains at the command post when the battalion commander is away. He makes decisions in the name of the latter as the occasion demands.

He keeps abreast of the situation and of the battalion commander's plans, and keeps the battalion commander informed of the strength, morale, training, equipment, supply, and tactical situation of the battalion. He coordinates all staff activities. He verifies the execution of orders and notifies the battalion commander of any matters needing correction. He supervises the keeping of the unit situation map and checks reports and orders prepared by the staff for correctness, completeness, clarity, and brevity.

10. S-1. *a.* The company commander of battalion headquarters company is also the battalion adjutant, S-1. For duties as company commander, see paragraph 47.

b. The duties of S-1 include—

(1) Receiving and delivering replacements to units.

(2) Securing means for recreation and for building and maintaining morale.

(3) Submitting recommendations for decorations, citations, honors, and awards as required.

(4) Maintaining strength and casualty reports.

(5) Maintaining the unit journal.

(6) Selecting the exact location of the command post when so directed, in conjunction with the communication officer.

(7) Arranging the interior installations (except signal communication agencies) and supervising the movements of the command post.

(8) Allotting space to subordinate units in bivouac and assembly areas (coordinating with S-3).

(9) Arranging for quartering parties. The battalion S-1, if available, will accompany quartering parties; otherwise he will arrange for the detail of another officer.

(10) Preparing data for tactical reports.

(11) Organizing the defense of the command post.

(12) Supervising mail distribution and collection.

11. S-2. *a.* The battalion intelligence officer (S-2) is primarily concerned with the collection, recording, evaluation,

and dissemination of information of the enemy and enemy-held terrain, and with counterintelligence measures. He must be prepared at any time to give his commander a synopsis of the hostile situation and an estimate of the enemy capabilities as they affect the battalion.

b. The duties of S-2 include—

(1) Planning of reconnaissances, and coordinating with S-3 the security measures relating to patrols and observation posts; personally making reconnaissances when the nature of the information desired indicates the necessity for such action.

(2) Insuring that S-2 data are posted on the unit situation map.

(3) Preparing data for tactical reports.

(4) Giving special training to the battalion intelligence personnel and controlling them during operations.

(5) Preparing intelligence plans and orders.

(6) Establishing and supervising the operation of battalion observation posts.

(7) Coordinating battalion information-collecting agencies. Exchanging information with the regiment and with adjacent and subordinate units.

(8) Coordinating with prisoner of war interrogation teams; in their absence, examining and promptly forwarding to the regiment captured personnel, documents, and materiel. (See FMs 7-25 and 100-10.)

(9) Procuring maps, aerial photographs, and photomaps from regimental S-2 and distributing them.

(10) Verifying camouflage and concealment measures.

(11) Coordinating counterintelligence measures in the battalion, including censorship. (See FM 30-25.)

12. S-3. *a.* The battalion operations and training officer (S-3) is concerned primarily with the training and tactical operations of the battalion. He must be prepared at any time to give the battalion commander a synopsis of the situation of the battalion and of adjacent and supporting troops, and to recommend possible lines of action.

b. The duties of S-3 include—

(1) Planning of security measures, and coordinating measures for reconnaissance with S-2. [See par. 11*b*(1).]

(2) Insuring that S-3 data are posted on the unit situation map.

(3) Preparing data for tactical reports.

(4) Planning and supervising all training in accordance with the regimental training program.

(5) Maintaining training records and preparing training reports.

(6) Selecting initial and subsequent general locations of the command post (coordinating with the communication officer), if not previously designated by the regiment.

(7) Making terrain analyses.

(8) Preparing detailed plans based upon the battalion commander's decision (coordinating with S-1 and S-4).

(9) Preparing operation maps and overlays.

(10) Assisting the battalion commander in the preparation of field orders (coordinating with other staff officers).

(11) Supervising signal communication and liaison with higher, adjacent, and subordinate units.

(12) Transmitting orders and instructions for the battalion commander.

13. S-4. *a.* The battalion supply officer (S-4) is assigned to the transportation platoon, service company (see FM 7-30). He performs staff and supply duties as directed by the battalion commander and is responsible for the functioning of the battalion supply system in the field and in combat, with particular reference to rations, water, ammunition, gasoline, and oil. For details of battalion supply, see chapter 5.

b. The duties of S-4 include—

(1) Preparing the battalion supply plan based upon the regimental supply plan and the tactical plan of the battalion commander.

(2) Controlling elements of the company transport and battalion trains (ammunition and kitchen and baggage

trains) when they are operating under battalion control. He is assisted in this duty by the battalion motor transport officer.

(3) Coordinating with the regimental supply echelon for details relating to the movement of battalion supplies and trains.

(4) Ascertaining the supply requirements of companies and attached units through personal contact.

(5) Establishing and operating the battalion ammunition supply point, and procuring ammunition from the regimental ammunition supply point. He is assisted in this duty by the battalion munitions officer (platoon leader of the ammunition and pioneer platoon).

(6) Insuring, during combat, that an adequate supply of ammunition is delivered to companies, the antitank platoon, and any attached units. For functions of the motor transport officer in ammunition supply, see paragraph 14.

(7) Making a reconnaissance for covered routes between the battalion and the regimental supply points and points of release of trains, and regulating the movement of vehicles on these routes.

(8) Keeping in close touch with the battalion command post in order to coordinate supply operations with the tactical situation, and supply plans with the tactical plans of the battalion commander.

(9) Planning and conducting the defense of the battalion ammunition supply point and of transportation under battalion control.

14. MOTOR TRANSPORT OFFICER. *a.* The motor transport officer is second-in-command of the battalion headquarters company. His staff duties as motor transport officer constitute his principal functions.

b. The duties of the motor transport officer include—

(1) In march or approach march situations, controlling such company transport and elements of the regimental trains as may be grouped under battalion control.

(2) Supervising, coordinating, and expediting the movement of company weapon carriers, ammunition train vehicles, and hand-carrying parties within the battalion area (between company areas and the battalion ammunition supply point) so as to insure an adequate supply of ammunition to all companies.

(3) Supervising and coordinating the activities of second echelon motor maintenance facilities operating within the battalion.

15. HEAVY WEAPONS COMPANY COMMANDER. The heavy weapons company commander, in addition to his command duties, assists the battalion commander in developing the battalion fire plan. He accompanies the battalion commander on reconnaissance, or makes separate reconnaissance and recommendations for the employment of supporting heavy weapons as directed. (See FM 7-15.)

16. ANTITANK OFFICER. The leader of the battalion antitank platoon is the battalion antitank officer, and assists the battalion commander in the planning and execution of the battalion antitank defense. He accompanies the battalion commander on reconnaissance or makes a separate reconnaissance and recommendations for the employment and coordination of antitank means as directed. (See FM 7-35.)

17. COMMUNICATION OFFICER. *a.* The battalion communication officer is responsible for the technical training and proficiency of the communication platoon of the battalion headquarters company, and for supervision of such technical training of communication personnel throughout the battalion as may be delegated to him by the battalion commander. He is responsible to the battalion commander for the planning, installation, operation, and maintenance of the battalion communication system. His duties include recommending (usually to S-3) initial and subsequent locations of the command post, if not previously designated by the regiment.

b. For detailed duties of the battalion communication officer in combat, see FM 7-25.

18. PLATOON LEADER OF AMMUNITION AND PIONEER PLATOON. *a.* The leader of the battalion ammunition and pioneer platoon performs such staff duties as the battalion commander may direct. He is charged with the training and supervision of his platoon in the execution of their ammunition, supply, and pioneer tasks. He accomplishes simple field engineering (pioneer) tasks not requiring the technical and special equipment of engineer troops. He assigns duties to members of his platoon in accordance with the requirements of the situation after consultation with the battalion S-4. He is also that battalion gas officer and battalion munitions officer.

b. His duties include—

(1) Performing pioneer reconnaissances; controlling the pioneer operations of his platoon. (See pars. 58-61.)

(2) Assisting S-4 in selecting, establishing, and operating the battalion ammunition supply point. (See pars. 60 and 61.)

(3) Within the battalion, supervising and coordinating gas defense training, gas defense measures, and use of decontaminating agents.

(4) Inspecting gas defense equipment.

(5) Supervising gas reconnaissance of routes and areas before their use by troops.

(6) Supervising the activities of his platoon in the employment, detection, and removal of mines and booby traps.

19. SURGEON. *a.* The battalion surgeon is a member of the battalion commander's staff and commands the battalion medical section. (See FM 7-30.) His staff functions pertain to the health and medical service of the battalion. He is the battalion sanitary inspector. He supervises the technical instruction of the battalion in personal hygiene, field sanitation, first aid, and malaria control. The battalion section normally has no administrative or supply functions. The battalion surgeon, when practicable, is present when field orders are issued.

b. His duties include—

(1) Obtaining from the battalion commander available information of tactical plans for the battalion; making a medical estimate of the situation; reconnoitering for aid station sites; submitting medical plans (usually through S-4) to the battalion commander for approval.

(2) Establishing the aid station, supervising its operation and personally assisting in the care and treatment of casualties.

(3) Evacuating sick and wounded within the battalion area to the battalion aid station.

(4) Keeping the battalion commander, the regimental surgeon, and the collecting company in immediate support informed of the situation as to sick and wounded.

(5) Making timely requests to the regimental surgeon for special support, additional supplies, additional personnel, and emergency evacuation of casualties.

20. COMMANDERS OF ATTACHED UNITS. *a.* Commanders of attached units are advisers to the battalion commander and staff.

b. Their duties include—

(1) Submitting plans and recommendations to the battalion commander and staff for the tactical employment of their units.

(2) Maintaining communication with the battalion commander, and keeping him advised of the combat capabilities of their units.

21. ARTILLERY LIAISON OFFICER AND FORWARD OBSERVERS *(See FM 6-20 and 6-101.). a.* An artillery unit in direct support of an infantry unit sends a liaison officer to each supported battalion (see par. 6). The liaison officer is the personal representative of the artillery commander and remains under his command. He contacts the infantry battalion commander in time to accompany the latter on reconnaissance and secure detailed information as to specific fire missions desired, and thereafter remains with him. Artillery

employs both wire and radio for communication; in emergencies, the infantry battalion commander should make his wire net available for artillery fire direction.

b. The primary mission of the artillery liaison officer is to advise and assist the infantry battalion commander in obtaining the desired supporting or reinforcing fires, and to keep his own commander informed of the situation. He must be able to inform the infantry battalion commander of the capabilities of the artillery in delivering any fires desired, and to transmit promptly to the artillery commander requests for supporting fires. To enable the liaison officer to carry out his mission, the infantry battalion commander must keep him informed at all times of the location of hostile and friendly units, the plan of maneuver, the plan of fires, and the immediate needs of the battalion.

c. As a secondary mission, the liaison officer adjusts the fires of his unit when necessary.

d. Direct-support field artillery battalions, and, in most cases, battalions reinforcing the fires of direct-support battalions, send out forward observers, usually in the ratio of one to each front-line company or similar unit. Forward observers are controlled and coordinated by the artillery liaison officer with the infantry battalion. All artillery observers coming forward to observe in an infantry battalion zone or sector report to the artillery liaison officer with that battalion in order to insure properly coordinated employment of all observers and to exploit all means of observation. Forward observers also keep in close contact with the forward elements of the infantry battalion.

e. The forward observer has two general missions. His primary mission is to observe and adjust artillery fire on those hostile elements which interfere with the mission of the unit with which he is working. His secondary mission is to keep the artillery battalion informed of the situation. The forward observer is not attached to the supported unit. He is not restricted to the zone of action or defense area of the supported unit. He goes where he can obtain the observation necessary to give effective artillery support.

22. CANNON COMPANY REPRESENTATIVES. Cannon platoons are frequently utilized for furnishing close supporting fires for front-line battalions. One or more platoons may support the action of the regiment as a whole. When supporting or attached to a leading or front-line battalion, the platoon leader reports directly to the battalion commander. When practicable, the platoon leader accompanies the battalion commander on reconnaissance; thereafter, he remains with or leaves his own representative with the battalion commander. The platoon leader seeks detailed information as to specific fire missions desired; the majority of these will be fire upon targets of opportunity. Frequent displacement of weapons is required in order that they may not be engaged by hostile artillery. Communication is maintained between the platoon leader and his sections by means of voice radios, sound-powered telephones, messengers, and arm-and-hand signals; pyrotechnics also may be used.

23. LIAISON OFFICERS. *a.* Staff or other officers may be used as liaison officers. They may be sent to higher or subordinate units or to adjacent units (including advanced reconnaissance elements under control of higher commanders). Such missions will usually involve brief visits to other units and prompt return to the battalion commander, in order that they may be readily available for subsequent missions.

b. Prior to departure on a mission, a liaison officer should receive from the battalion commander—

(1) Definite and detailed instructions, in writing if practicable, as to the liaison mission.

(2) Information of the battalion commander's plans, particularly if they affect the unit to which he is to be sent.

(3) Information as to what facilities (signal and transportation) are available for transmission of any messages the liaison officer is to send prior to his return.

c. Prior to departure the liaison officer should also—

(1) Familiarize himself with the situation of his own unit and so far as practicable with that of the unit to which sent.

(2) Insure that arrangements for communication (signal and transportation) are adequate.

(3) Obtain credentials in writing unless obviously unnecessary.

d. On arrival at the headquarters to which sent, the liaison officer should—

(1) Report promptly to the commander, stating his mission and exhibiting his directive or credentials, if in writing.

(2) Arrange for the transmission of messages he may be required to send.

(3) Familiarize himself with the situation of the unit to which sent.

(4) Accomplish his mission without interfering with the operations of the headquarters to which sent.

(5) Keep a record of messages sent to the battalion commander.

(6) Advise the visited unit commander of the contents of messages to be sent to his battalion commander.

(7) Make prompt report to his battalion commander if he is unable to accomplish his liaison mission.

(8) Report his departure to the visited unit commander on the completion of his mission.

e. On return to his battalion commander the liaison officer should—

(1) Report on his mission.

(2) Transmit promptly any requests of the commander from whose headquarters he has just returned.

Section III

TROOP LEADING

24. GENERAL. The command procedures involved in the actual leading, fighting, and supplying of a unit in combat are termed troop leading. By his plans and orders, by full use of his staff, and by his actions before, during, and after battle, the commander makes his troop leading effective.

25. ACTIONS PRIOR TO ISSUANCE OF ORDERS. *a. Estimate of the situation.* The estimate of the situation is a continuing process for the battalion commander throughout an operation. During combat operations extending over a period of several days, the battalion commander seldom faces an entirely new situation. Combat usually consists of a series of connected incidents most of which must be acted on immediately. The battalion commander must be constantly thinking ahead to make plans for future operations and for contingent situations that may develop. Infantry is frequently engaged on short notice and time is a vital factor. Quick and successful engagement depends on the preliminary *planning* of the commander and on the execution of his plans by his troops. The necessary preparations for combat, including reconnaissance, estimate of the situation, formulation and issuance of orders; the movement of troops into assembly areas (positions); and arrangements for supply, evacuation, and communication are carried on concurrently so far as is possible. For a description of the procedure for forming a commander's estimate of the situation, see FM 101-5.

b. Action upon receipt of orders. (1) The regimental orders may be delivered to the battalion commander, or he may be directed to report to the regimental commander to receive them. In the latter case, before leaving the battalion area, he issues to his executive officer (second-in-command) instructions for the conduct of the battalion in his absence. He takes with him the necessary personnel, communication facilities, and transportation. His party may include S-1, S-2, S-3, S-4, the heavy weapons company commander, antitank officer, communication officer, artillery liaison officer (if he has reported), operations sergeant, radio personnel with suitable equipment, and one or more messengers. The battalion commander usually leaves the majority of his party in a concealed location within signaling distance and takes only one or two officers to receive the regimental order.

(2) When the battalion commander receives an oral order from the regimental or higher commander, he makes such notes as are necessary to outline his mission and to assist him in planning his own order. His notes must be sufficiently

clear and comprehensive to permit his successor to understand the assigned mission should the battalion commander become a casualty.

(3) Upon receipt of the order, he obtains, or has his staff obtain, from the regimental staff and from any representatives of units in contact with the enemy, any additional information that applies particularly to his battalion. If he is not furnished an operation map, he has pertinent data, shown on the regimental map, copied on his own map. He makes a brief map study and forms a tentative tactical plan. He sends to his battalion any necessary instructions for immediate movement or for expediting its preparations for combat. Whenever possible, he will designate a time and place for subordinate commanders to assemble to receive his orders. He arranges for coordinated action with commanders of adjacent and supporting units or reaches an agreement to effect this coordination when plans have been developed. He informs the staff of his tentative plan and of the recommendations he wants from them, and designates a time and place to receive their reports. His further actions depend on the situation and the time available.

c. Reconnaissance. When time is pressing, the battalion commander's plan of action may of necessity be based solely on a map study or on his previous knowledge of the situation and terrain. Whenever practicable, however, it is based on a personal ground reconnaissance. Before starting he estimates the time available, decides on the route to follow, and determines what to look for. Sufficient time must be allowed to issue orders to subordinate commanders and permit them to make their reconnaissances, prepare their plans for combat, and issue their orders. The battalion commander usually is accompanied by S-3, the artillery liaison officer, and in defensive situations, the heavy weapons company commander. Other available officers may accompany him on his reconnaissance; however, quicker results can be obtained by directing these officers to reconnoiter separately, secure specific information, and report at a designated place and time with their recommendations. He may take with him a portable

voice radio in order to maintain contact with his command post and other elements.

d. Completion of plan. (1) After completing his reconnaissance, the battalion commander receives any reports or recommendations not previously rendered and completes his plans. If time permits he has operation maps (or overlays or sketches) prepared for issue to the company commanders. He may release those officers who have accompanied him on his reconnaissance and who are familiar with his plan, in order that they may begin their preparations for combat.

(2) When the battalion comamnder has not directed an assembly of subordinates to receive his order, he dispatches fragmentary orders by the most expeditious means, usually by a staff officer. Otherwise he promptly prepares notes for his order while a member of his staff orients the company commanders on the situation and the terrain.

26. BATTALION FIELD ORDERS. The battalion commander issues field orders to warn the battalion of impending operations (warning orders) or to direct operations. Items shown on operation maps or covered by standing operating procedure will be called to the attention of subordinates at the beginning of the order. Such items and other information already known by subordinates need not be repeated in the order.

a. Warning orders. Battalion warning orders should give preliminary notice of contemplated action and enable subordinates to make necessary preparations to carry out the action to be directed by a more complete field order which is to follow. Warning orders should normally include only the answers to such of the interrogatives *who, what, when, where,* and *why* as are available. Details included in the warning orders may be omitted from the subsequent order.

b. Fragmentary orders. The battalion commander issues fragmentary orders when speed in delivery and execution are imperative. He may issue them orally in person, direct a staff officer to issue them orally, or have them sent as messages. In fragmentary orders adequate information must be included

regarding the action of units other than the particular one(s) to which the orders are issued.

c. Oral orders. Mutual understanding and more thorough coordination are assured by issuing complete oral orders to assembled subordinate commanders. Such orders must, however, be issued in sufficient time to permit these subordinate commanders to make their reconnaissance and prepare plans for combat. The place of issue preferably is one from which much of the field of operations is visible; locations which may receive hostile fire are avoided. The battalion commander uses simple, clear, concise language. When he is sure of mutual understanding, he announces the time and has watches synchronized. S-3 makes notes so that a record of the order may be entered in the journal.

27. ACTIONS AFTER ISSUANCE OF ORDERS. *a. Supervision.* The battalion commander supervises the execution of his orders to insure that the plan is understood and is carried out by subordinate units.

b. Keeping abreast of the situation. During combat the battalion commander goes where he can best observe the action of the battalion or exert the greatest influence to obtain decisive results. Although the battalion commander operates from the command post, he will ordinarily spend the greater part of his time at the observation post or some other point at which he can obtain the fullest and most direct information regarding the operations and situations of his companies. He makes such reconnaissance as he considers necessary and frequently visits his subordinate commanders and his troops. He maintains continuous contact with his command post and, before leaving the observation post, orients his staff as to future plans and informs them of his itinerary and approximate time schedule. At all times he studies the situation, considers possible contingencies and prepares tentative plans to meet them. He keeps his staff informed of any orders issued or information acquired. If he issues orders or acquires information affecting the general situation, he informs higher headquarters at the first opportunity.

28. OPERATION MAP. *a.* The operation map may be a graphic representation of all or part of the battalion commander's decision and tactical plan. The map should be authenticated, have such brief explanatory notes as are necessary, and should present a clear picture. Detailed instructions that cannot be shown graphically are put into the accompanying order. FM 101-5 gives examples of some of the items which may be placed on the operation map.

b. The battalion commander issues some form of operation map whenever practicable. It may be only a rough sketch or an overlay. It should clarify the tactical plan for the company commanders and serve to shorten the order; it may constitute the entire order. Sufficient copies are reproduced to furnish one to each unit concerned.

29. STANDING OPERATING PROCEDURE. Standing operating procedure of the battalion will supplement that of the regiment to make routine those administrative and tactical features that may be standardized without loss of effectiveness. (See FM 7-40.) Tactical decisions and dispositions must be based on the immediate situation and therefore are not standardized into standing operating procedure.

Section IV
STAFF RECORDS, REPORTS, AND MAPS

30. REFERENCES. For the general form and description of staff records, reports, and maps, see FMs 101-5 and 7-40.

31. GENERAL. Battalion staff records should make information readily available, form a basis for reports and historical records, and enable the commander, or any member of the battalion staff, to orient himself quickly concerning the situation. Staff records must be reduced to the simplest form and smallest practicable number, in order that the staff may function in rapidly moving situations, in the field, at night (with little or no light), and under adverse weather conditions.

32. THE JOURNAL. A form for a journal and a description of its use are contained in FM 101-5. The battalion headquarters keeps one unit journal; it is kept under the supervision of S-1.

33. SITUATION MAP. *a.* The battalion situation map is a graphic record of the tactical situation at any time. It is usually maintained at the command post under the supervision of the battalion executive. It should be conveniently accessible to the battalion commander and staff.

b. Military symbols prescribed in FM 21-30 are used on the situation map. Entries are removed as they become obsolete.

c. Copies or overlay tracings of the situation map as it stands at the close of given periods may be prepared to accompany battalion reports. Maps are filed as a record.

34. STAFF NOTES (WORK SHEETS). Each battalion staff officer keeps such notes as are necessary to write his part of the unit report.

35. UNIT REPORTS. A form for a unit report and instructions concerning it are contained in FM 101-5. It is prepared under the supervision of the battalion executive. Members of the staff furnish material to be included under topics pertaining to their staff functions.

36. MAPS, OVERLAYS, AND SKETCHES. Maps, overlays, and sketches showing graphically the situation as of a particular time are a valuable aid in shortening and clarifying unit reports sent to regimental headquarters. Maps, overlays, and sketches are used by reconnaissance and security detachments and by subordinate units to advise the battalion commander with regard to their situation and information of the enemy.

Section V
COMMAND POST

37. REFERENCES. For duties of personnel of the battalion headquarters company at the command post, see chapter 3. For additional details concerning duties of personnel of the battalion communication platoon, see FMs 7-25 and 24-5.

38. GENERAL. In the field the headquarters of the battalion is called the command post. All agencies of signal communication in the battalion center at the command post. The battalion commander, the staff, and such other officers as are required by the commander (see par. 7) constitute the command group that operates at and from the command post.

39. ORGANIZATION. The command post is organized to furnish facilities for the battalion commander, the staff, communication agencies, and such other officers and enlisted personnel as may be present. It should be concealed from air and ground observation and defiladed from flat-trajectory fire. The different installations should be separated by at least 50 yards to avoid destruction of more than one by a single shell or bomb.

40. LOCATION. *a. On the march.* During tactical marches the battalion command group usually moves near the head of the battalion. The number of vehicles is held to a minimum; those not necessary for command purposes move at the head of the battalion motor echelon. Part of the battalion communication platoon (messengers and radio) is prepared to furnish communication and marches near the command group. This group and its accompanying communication agencies constitute a march command post. When the battalion is acting as an advance guard, the command group marches at the head of the reserve.

b. During combat. (1) During combat the general location of the initial battalion command post is usually prescribed by the regimental commander, who may also prescribe

subsequent locations. If the general location is not so prescribed, the battalion commander selects and reports its location to the regimental command post.

(2) The battalion command post is so located as to facilitate control of the battalion. Other considerations that influence its location are the type of tactical operation involved (attack or defense), routes of communication to the regimental command post and to subordinate units, concealment and defilade, proximity to the observation post in moving situations, and obstacles to mechanized attack. Entrances to towns and villages, crossroads, and other places which attract enemy fire are avoided. An alternate location is selected to which the command post can move, if necessary. In static situations wire should be laid to the alternate command post. In the attack the initial location should be well forward to avoid early displacement. In wooded or rolling terrain, command posts can usually be located farther forward than in terrain which offers less cover and concealment. In defensive situations they are generally located in the rear part of the battalion defense area, in rear of the organized position of the battalion reserve, in order to avoid displacement in the event of a local enemy penetration.

(3) The command post should be designated by reference to some terrain feature which is easily located on the ground and on the map. Guides are posted to direct personnel and vehicles to the command post and parking area, respectively.

(4) After the general location of the command post has been prescribed, S-1, accompanied when practicable by the communication officer, selects the exact location. When S-1 is not available, the communication officer may be designated to make this selection.

41. ESTABLISHMENT. The officer selecting the exact site determines the interior arrangement of the command post and designates the location for installations. The battalion communication officer directs the installation of communication facilities; wire is laid to the battalion observation post(s). (See FM 7-25.) Motor vehicles are parked in a concealed location, removed from the command post so as not

to disclose the presence of the command post. Traffic entering and leaving the parking area is strictly controlled. Tents are pitched only at night or when concealment is assured. Sentries are posted to enforce orders relative to camouflage, concealment, and control of traffic. Installations are dug in, time permitting.

42. OPERATION. *a.* The command post is organized for continuous operation and to insure the necessary rest for personnel. Every staff officer must be familiar with the duties of at least one other staff officer, in order to effect reliefs when necessary. A usual pairing is S-1 with the battalion executive, and S-2 with S-3. Enlisted personnel work in shifts.

b. Full use of signal communication facilities is made in the transmission of orders and messages. All incoming special messengers go first to the message center to find the location of the sergeant major to whom they deliver their messages. Scheduled messengers deliver their messages to the message center, which receipts for them and delivers them to the sergeant major. Special messengers report again to the message center before leaving the command post in order to pick up any mesasges for delivery to their unit or activity. The sergeant major supervises the circulation of all incoming messages to interested officers and their return for entry in the unit journal. Staff officers mark on the messages any action taken. Each company or unit should send two runners to the battalion command post. These runners must know the location of the command posts of their respective units and covered routes thereto.

c. Outgoing written messages are usually sent through the message center. After the message center chief receives notice that the message has been delivered, he places the duplicate copy in his dead file which is turned over periodically to S-1 for entry in the unit journal. When there is no means available for rapidly clearing a message, the message center chief promptly advises the writer of the message.

d. Officers insure that a synopsis of each message or order sent or received orally, whether by messenger, telephone, or voice radio, is sent to the unit journal immediately.

43. DISPLACEMENTS. In an offensive situation the battalion command post is kept close to the attacking echelon in order to facilitate communication between the command post and the troops, and to afford protection to the command post. To permit rapid displacement the movement of the command post must be anticipated and reconnaissance made in time to permit its accomplishment at the desired time. (See FM 7-25.) The communication officer keeps the wire head pushed close to the advancing troops in order that wire communication may be available when the command post is moved. When the battalion commander directs that the command post be moved forward, the old location is abandoned except for temporary guides, and the staff and other personnel proceed to the new location without delay. When desirable, a staff officer may remain at the old location with enough communication personnel to operate the agencies of signal communication and to close these agencies when they are no longer required. If the regiment has not prescribed the general locations of command posts for the battalion along an axis of signal communication, the battalion commander prescribes the new location. The communication officer establishes communication in the new location in advance, when practicable. The regiment is kept informed of the movement. For displacement of the command post in retrograde movements, see paragraphs 246, 254, and 256.

44. COMPANY COMMAND POSTS. In combat, company commanders select the locations for their command posts and report these locations to the battalion commander, unless they have been previously designated by the latter.

45. SECURITY. *a.* The headquarters commandant (S-1) is responsible for the security of the battalion command post in combat. Being well forward, the command post is provided *incidental* security against hostile air and ground forces by front-line units and the battalion reserve. However, small hostile groups may suddenly appear at any point in the area, and the command post must be provided with a well-planned system of local protection. A perimeter defense is employed. All personnel except those whose duties require

their presence at their functional installations (such as telephone operators) are divided into provisional squads for defense. Upon warning of enemy approach, they are assembled at rallying points in the vicinity of their installations; from these points they proceed to their respective positions on the perimeter.

b. The command post must be concealed from air and ground observation and defiladed from flat-trajectory fire. (See also par. 71.) Positions on reverse slopes will afford partial protection from high-angle fire.

Chapter 3

BATTALION HEADQUARTERS COMPANY

Section I

COMPANY HEADQUARTERS

46. COMPOSITION. For tactical operations, company headquarters is divided into a command group and an administration group.

a. The command group consists primarily of personnel whose duties in combat are directly associated with battalion headquarters and in large part performed at the battalion command post, ammunition supply point, or train bivouac. In this group are the following:

Company commander [battalion adjutant (S-1)].
Second-in-command (battalion motor transport officer).
First sergeant.
Motor sergeant and automobile mechanic.
Bugler and orderly.
Basic privates.

b. The administration group consists of personnel whose duties relate to the mess and supply of the headquarters and headquarters company, and to company personnel administration. This group includes the following:

Mess sergeant, cooks, and cook's helpers.
Supply sergeant.
Armorer-artificer.
Company clerk.

47. DUTIES OF COMMAND GROUP. *a. Company commander (battalion adjutant).* The company commander is responsible for the administration, discipline, and training of the company and for the proper maintenance of its transport. He assigns appropriate duties to individual members of the company in accordance with the Table of Organization and Equipment, and provides for additional training of individuals to replace key personnel. The company commander

also functions as the battalion adjutant (S-1). For the duties of S-1, see paragraph 10. As battalion headquarters commandant he is responsible for the conduct of the defense of the command post against air and ground attacks. (See pars. 45 and 71.) Weapons carried by the battalion headquarters company as organizational equipment, or as extra equipment when authorized by the theater commander to be issued to companies as conditions arise, are carried normally on the company transport.

b. Second-in-command (battalion motor transport officer). The second-in-command performs the normal duties of the second-in-command of a company. In addition he serves in the special capacity of battalion motor transport officer. For his duties as motor transport officer, see paragraph 14.

c. First sergeant. The first sergeant assists the company commander in the administration of the company.

d. Motor sergeant. The motor sergeant is responsible to the company commander for the proper performance of first echelon maintenance by drivers of all motor vehicles assigned to the company and for the training of all drivers in the company. He is also responsible for the proper performance by the company automobile mechanic, within the means of the company, in second echelon maintenance of motor vehicles assigned to the company and those assigned to the rifle companies of the battalion. (See FM 25-10.) He supervises the loading and movement of any cargo trucks attached to the company and also acts as assistant to the battalion motor transport officer.

e. Motor mechanic. The motor mechanic performs second echelon maintenance under direction of the motor sergeant. He drives the maintenance truck and is responsible for its first echelon maintenance.

f. Orderly. The orderly serves the battalion commander and staff. He participates in the defense of the command post. He drives the battalion commander's vehicle and is responsible for its first echelon maintenance.

g. Bugler. The bugler sounds such calls, warnings, and alerts as may be ordered. He is especially trained as a messenger and serves the company commander in that capacity. He participates in the defense of the command post.

h. Basic privates. Basic privates are used as messengers, for replacements, and in the defense of the command post.

48. DUTIES OF ADMINISTRATION GROUP. *a. Mess sergeant.* The mess sergeant is responsible to the company commander for the procurement of rations and water, division of rations into meals, training of cooks and cook's helpers, and for operation of the headquarters and headquarters company mess. The mess sergeant, cooks, and cook's helpers operate in the kitchen location, which is usually in the regimental train bivouac. (See FM 7-30.)

b. Supply sergeant. The supply sergeant is charged with receiving and issuing supplies, except rations and water, for battalion headquarters and for the several components of headquarters company. He supervises the work of the armorer-artificer. During combat he usually will be in the forward area in order to assist the company commander in matters relating to supply, particularly supply of ammunition.

c. Company clerk. The company clerk is employed in the regimental military personnel section under the supervision of the military personnel officer.

49. MARCH DISPOSITIONS. *a.* When not performing duties that require their presence elsewhere, the members of the company command group usually march with or near the battalion command group.

b. The administration group marches with the battalion trains, commanded by the senior present, but subject to the orders of the train commander.

50. TRAINING. In addition to being trained for their special duties, all personnel of company headquarters are trained as individual soldiers.

51. COMPANY ADMINISTRATION. The battalion headquarters company is administered in a manner similar to that of a rifle company. For details see FMs 7-10, 7-30, and TMs 12-250, 12-252, and 12-255.

Section II

BATTALION HEADQUARTERS SECTION

52. COMPOSITION AND DUTIES. The battalion headquarters section is composed of personnel provided for the operation of the battalion command post and observation post(s). Personnel and their duties are as follows:

a. Sergeant major. Supervises the functioning of enlisted men in battalion headquarters; assists the executive officer and S-1; also handles messages. (See par. 42.)

b. Operations sergeant. Keeps the situation map and assists S-2 and S-3.

c. Intelligence sergeant. In charge of battalion observation post(s) and intelligence observer scouts; operates at observation post or with patrols; may assist operations sergeant, especially in work for S-2.

d. Clerk, headquarters. Performs clerical work on records, including the journal, and does any typing required.

e. Gas corporal. Battalion gas noncommissioned officer; assists battalion gas officer. (See par. 18 and FM 21-40.)

f. Intelligence observer scouts. Operate at observation post(s), or accompany front-line units, patrols, raiding parties, or reconnaissance and security detachments as intelligence scouts.

g. Truck drivers. Operate assigned motor vehicles, and perform first echelon maintenance.

Section III

COMMUNICATION PLATOON

53. GENERAL. The communication platoon is composed of a platoon headquarters, a message center section, a wire

section, and a radio and visual section, under command of the battalion communication officer. For duties of the battalion communication officer, see paragraph 17. He is assisted by the battalion communication chief who is second-in-command; together they, with any basic privates who may be assigned to the platoon, compose the platoon headquarters. The regimental communication officer supervises the technical training of the platoon. For methods of installing, operating, and maintaining the means of signal communication see FMs 24-5, 24-18, and 24-20. For details of communication methods and procedure and use of technical equipment, see FM 7-25. For equipment and transportation, see T/O and E 7-16 and TBA catalog.

54. MESSAGE CENTER SECTION. *a. Composition.* The personnel of the message center section consists of the message center chief, code clerks, and messengers.

b. Mission. The message center section operates the battalion mesage center; its sole purpose is to speed the transmission of messages. In a message center as small as that of the battalion, one man may perform the duties of the message center during slack periods. Each member of the message center team must be trained to perform all the duties incident to message center operation. The message center section should be able to operate as two or more teams in order to provide for continuous operation when the command post is being moved and to allow rest for its members.

c. Duties of personnel. (1) The message center chief organizes the message center, assigns locations within the message center for clerks and messengers, places necessary guides along routes of approach to the command post in order to guide messengers and others, instructs messengers in the route to all command posts and other installations, sees that sufficient forms and other message center equipment are on hand, notifies the battalion communication officer and the battalion sergeant major as soon as the message center is in operation, and supervises such operation. He keeps himself informed as to the current status of all available means of signal communication serving the command post. He routes

messages through the means which will insure the most rapid delivery to the addressee.

(2) Code clerks are assistants to the message center chief. They perform such encryptographing and decryptographing of messages as may be necessary, and act as reliefs for the message center chief.

(3) The messengers deliver messages to subordinate, higher, and adjacent units.

55. WIRE SECTION. The wire section includes a section leader who is battalion wire chief, switchboard operators, and linemen (telephone and telegraph). The wire section installs the switchboard and telephones at the command post and operates the switchboard. The section delivers the sound-powered telephone equipment to battalion personnel designated to use it. The section is responsible for constructing a wire line to the battalion observation post(s) and keeping a wire line well forward in an attack ready for prompt displacement of the command post. In defensive situations the wire section may be required to install lateral lines to adjacent battalions; in prolonged defensive situations when extra telephones are made available, lines to front-line companies will be installed. In some circumstances it may be directed to lay wire between its own command post and the regimental command post; normally, however, the regimental wire section lays wire to the initial battalion command post which is thereafter extended by the battalion wire section prior to movement of the battalion command post.

56. RADIO AND VISUAL SECTION. The personnel of the radio and visual section consist of a radio and visual chief, radio operators, and a radio repairman. The section installs and operates the telegraph and radio equipment, the panel display and message dropping ground and the pick-up message equipment; it also operates the pyrotechnics used at the battalion command post.

57. MEANS OF SIGNAL COMMUNICATION. *a.* The technical communication equipment carried by the communication platoon consists of light field wire with the means to lay

and recover it; battery-operated telephones and telegraph instruments; sound-powered telephone sets; key and voice radio sets; and pyrotechnic and panel equipment. Motor and foot messengers are used to supplement the technical means of communication.

b. Reliance is not placed upon any one means of communication to the exclusion of others. Whenever possible during combat, the battalion command post will have wire communication to the regimental command post and to the battalion observation post. It will have radio communication to the regimental command post and the companies, and between the command post and the battalion commander wherever he may go. These will be the minimum technical means which will be in use.

c. Direct communication between the battalion and aviation is infrequent. It ordinarily is conducted through ground channels to the headquarters having an air-staff section, and thence to the air force. If direct communication is considered necessary for close coordination, in cases such as when the battalion is detached, or surrounded, or engaged in combat on a small island, or when bombing missions close to the front lines have been ordered, the following means may be employed:

(1) An army air force detachment equipped with radio netted with the aircraft concerned and known as a visual control team, may be attached to the infantry battalion. This team may be transported by airplane and dropped by parachute when necessary.

(2) By prearrangement, a plane may execute a special maneuver, or discharge smoke or pyrotechnic signals, or drop written messages or photographs.

(3) By prearrangement, the battalion may transmit brief messages by panel; or use panels, smoke pots, or mortar smoke to outline a portion of the bomb safety line or the location of the battalion's leading elements. Pyrotechnics from ground to plane are not satisfactory.

(4) Liaison planes or other slow flying aircraft may be used to pick up written messages while in flight.

d. The commander of an attached tank unit, by means of the infantry type radio set in the command tanks of companies and platoons, enters the command net of the infantry battalion. In addition, the tank battalion or company may send a liaison agent with a frequency modulated radio set to the battalion or company command post. This gives an additional channel of radio communication. A telephone box on the rear of each tank facilitates outside-to-inside conversations; this should be improvised, using a field telephone, if one is not already installed. Each tank commander operates his tank from the open turret until forced by fire to close it. Hand and other prearranged signals and tracer target designation are used freely. It is essential that positive communication exist between foot and tank troops, down to include infantry squad leaders and commanders of individual tanks.

Section IV

AMMUNITION AND PIONEER PLATOON

58. REFERENCES. For training in simple field engineering and field expedients, installing land mines and booby traps, and ammunition supply, see FMs 5-15, 5-30, 5-31, 7-30, 7-35, and 25-10.

59. COMPOSITION. For organization, equipment, armament, and transportation, see T/O and E 7-16.

60. FUNCTIONS. The ammunition and pioneer platoon is concerned with the ammunition supply of the battalion, the execution of simple field engineering tasks not requiring the technical training and special equipment of engineer troops, and the installation and breaching of mine fields. The platoon leader assigns duties to members of the platoon in accordance with the requirements of the situation after consultation with battalion S-4. During combat the platoon, under the supervision of battalion S-4, operates the battalion ammunition supply point and uses this point as a base for all its activities.

a. Ammunition supply. In combat the platoon leader makes available to the battalion S-4 such portion of the platoon as is necessary for ammunition supply. The platoon operates the battalion ammunition service as directed by the battalion S-4, loads and unloads ammunition vehicles, and when the situation does not permit the transportation of ammunition by weapon carrier beyond the battalion ammunition supply point, carries the ammunition forward by hand to the company areas where it is taken over by company ammunition bearers. It may carry the ammunition directly to the weapons. Personnel may be attached to one or more subordinate units when it appears that considerable movement of ammunition by hand will be necessary. They may also accompany empty ammunition vehicles to assist in loading them at the regimental ammunition supply point.

b. Pioneer work. The pioneer duties of the platoon include minor road repair, bridging of small streams and ditches, temporary repair of small bridges and culverts, making ravines and ditches passable for motor vehicles, maintenance of crossings at fords, elimination of obstructions and obstacles to motor vehicles, marking routes and localities, execution of minor demolitions, and execution of such field expedients as are necessary for the road and cross-country movement of the battalion vehicles. On the march, when engineers are not attached, the platoon may be divided into two groups. The first group is employed near the head of the battalion for minor road maintenance and repairs and for removing obstacles and obstructions. The second group accompanies the battalion trains and assists their movement. During combat a portion of the platoon will usually be employed on pioneer tasks in order to assist the forward movement of vehicles.

c. Installation and breaching of mine fields. The platoon will be prepared to: lay, mark and record mine fields; recognize all types of mines and booby traps used by friendly and enemy troops; disarm, lift and destroy activated antitank and antipersonnel mines and booby traps of all types used by friendly and enemy troops; and breach extensive mine fields. The platoon is furnished with portable mine-detector sets.

61. DUTIES OF PERSONNEL. *a.* The platoon leader functions as battalion pioneer, munitions, and gas officer. He supervises the work of his platoon and assists S-4 in the operation of the battalion ammunition supply point. (See par. 18.)

b. The platoon sergeant is assistant to the platoon leader. He may be placed in charge of all men of the platoon assigned for duty with ammunition supply, or he may be used to assist in supervising pioneer work.

c. The squad leaders supervise the work of their squads.

d. A truck driver drives the vehicle assigned to the platoon and performs first echelon maintenance.

e. The privates are the ammunition bearers and perform pioneer and mine work. (See par. 60.)

Section V

ANTITANK PLATOON

62. REFERENCES. For characteristics of the 57-mm gun and for mechanical training, gun drill, and technique of fire, see FM 23-75. For training of individuals in other weapons see FMs 23-5, 23-7, 23-30, and 23-65. For tactics of the squad and platoon, see FM 7-35.

63. COMPOSITION. For organization, equipment, armament, and transportation see T/O and E 7-16 and TBA catalog.

64. MISSIONS. *a. Primary mission.* The primary mission of the battalion antitank platoon is to provide antimechanized defense to the battalion. To provide all-around security, its guns must be coordinated with the other antimechanized means of the battalion and the regiment. Frequently, the antimechanized defense of the battalion is supplemented by elements of the regimental antitank company. Exceptionally, it is detached for special missions. The antitank company commander, as regimental antitank officer, will frequently include the employment of the battalion antitank platoon in

his plan for regimental antimechanized protection, particularly in defense. Ordinarily, the platoon will be employed within the area of its own battalion.

b. Secondary missions. Secondary missions include firing on hostile antitank guns and other located crew-served weapons, emplacements, pillboxes, and other point targets. Secondary targets will be many and frequent when a battalion is employed as a front-line unit or on an exposed flank, or is engaged in a special operation, such as an attack against a town or fortified position. If a hostile mechanized attack develops while guns are engaged in any secondary mission, they revert at once, without further orders, to their primary mission of antimechanized defense.

65. READINESS FOR ACTION. Crews manning antitank guns must be prepared at all times to meet a sudden mechanized attack. Men are trained to fire in any direction in the shortest possible period of time. During marches, when the platoon is directed to provide protection by occupying successive positions along the route or zone of advance, guns may be held mobile, coupled to truck (prime mover), in the vicinity of tentative firing positions. In other situations guns are uncoupled and either occupy firing positions or cover positions in the immediate vicinity of firing positions. (See FM 7-35.)

66. COMMUNICATION. The platoon must rely on foot messengers, arm-and-hand signals, and the platoon headquarters truck for transmitting orders or information unless adequate technical means, such as sound-powered telephones or voice radio, are allotted to it. While it is the responsibility of the battalion commander to maintain contact with the platoon, the platoon leader should assist him in this respect by the utilization of all means of communication at his disposal.

67. COORDINATION WITH OTHER UNITS. *a.* The platoon leader makes timely recommendations to the battalion commander for the use of his platoon to insure that the combination of antitank guns, antitank rifle grenades, rocket

launchers, and mine fields, and other obstacles provide the best possible protection to the battalion. (See par. 64.) He cooperates with the commander of any other antitank elements which may be located in the immediate vicinity of his position area(s).

b. Antitank guns must be protected against night attack by specially detailed troops armed with rifles and bayonets, or be moved within an area occupied by riflemen.

68. AMMUNITION SUPPLY. *a.* Prescribed loads of ammunition are carried on prime movers and are maintained as continuously as possible. The battalion S-4 is responsible for resupply of ammunition to the vicinity of the gun positions; he is assisted by the ammunition and pioneer platoon. (See pars. 60, 86.) The antitank platoon leader is responsible for maintaining a record of ammunition expenditure, making timely requests to battalion S-4 for replenishment and making every effort to insure positive results. He is assisted in these duties by the platoon sergeant.

b. Upon the arrival of a platoon or squad at its uncoupling position, sufficient ammunition to meet contemplated needs is unloaded from the prime mover(s) and hand-carried to the firing position(s).

c. In the attack, because of the limited mobility of the antitank gun when moved by hand, prime movers should usually remain under cover near gun positions, and should not be used for ammunition supply. The platoon headquarters truck may be used in emergencies. If replenishment in larger quantities becomes necessary, and battalion transportation is not available, the battalion commander must arrange to secure a vehicle from the ammunition train. In a rapid forward movement, such as with an advance guard, or in pursuit, the system of supply is similar to that in an attack. When distances from supply points are great, needs must be anticipated, and additional quantities of ammunition and transport secured from the regiment.

d. In defensive situations, the battalion commander prescribes the amount of antitank ammunition to be unloaded in the battalion defense area. Frequently, after the enemy

has established contact, replenishment from the rear is impracticable during daylight; however, provision must be made for the immediate resupply of elements of the platoon whose ammunition becomes seriously depleted. This is accomplished by keeping part of the ammunition at a platoon supply point near the gun positions. Further resupply is effected after dark.

e. During retrograde movements, resupply is held to the minimum necessary for antimechanized defense, amounts estimated as sufficient for contemplated needs being left with each squad. Regimental or ammunition-carrying vehicles may be released to the platoon on rear positions, or resupply may be effected by the establishment of ammunition supply points by higher headquarters, either on rear positions or en route thereto. The battalion commander will inform the platoon leader as to the exact location of such points.

Section VI

SECURITY

69. GENERAL. Security embraces the measures taken by a command to protect itself against annoyance, surprise, and observation by hostile air and ground forces, in order to maintain its own freedom of action. Principal threats are from hostile armored vehicles and infiltrating combat patrols on the ground, and hostile aircraft and airborne troops from the air.

70. WARNING SYSTEM. *a. General.* The regimental antiaircraft-antimechanized warning system includes an intelligence system and a signal communication system, both coordinated to insure early and continuing information of the presence and action of hostile air and armored elements. (See FM 7-40.) The battalion system is included in that of the regiment. Air-antitank guards and small patrols are employed to cover all approaches. They give prompt warning of the approach of hostile air and armored elements, including troops landing by parachute or glider.

b. Standard warning signal. The following standard warning signal is prescribed to give warning of the approach of hostile aircraft or armored vehicles: three long blasts of a whistle, vehicular horn, or siren, repeated several times; or three equally-spaced shots with a rifle, carbine, or pistol; or three short bursts of fire from an automatic weapon. In daylight, the individual giving the signal indicates, by pointing, the direction of the danger. To indicate enemy tanks, he strikes his fist several times against his rifle or carbine between the upper sling swivel and the front sight. At night, the alarm signal will be supplemented by voice to indicate direction. In addition to the standard signal, other available means, such as radio and pyrotechnics, may be employed.

71. DEFENSE OF THE BATTALION HEADQUARTERS COMPANY. *a. Responsibility of leaders.* The battalion headquarters commandant (S-1) is responsible for the plan and conduct of the defense of the battalion command post. (See par. 45.) He coordinates with other staff members in order to insure maximum functioning efficiency; however, in selecting the exact location, considerations of *defense* will be of primary importance. The defense plan provides for the occupation of sectors in such a manner as to insure all-around defense of every part of the command post. In like manner, the battalion supply officer (S-4) is responsible for the plan and conduct of the defense of the battalion ammunition supply point, as well as of transportation under battalion control. (See par. 13.) The responsible officers mentioned are charged with the installation of any mines, booby traps, tactical and protective wire and other obstacles. (See par. 72 and Chapter 9.)

b. Defense of installations and individual protection. The installations operated by personnel of the company are defended by such personnel. (See par. 45.) Prone shelters may be authorized in rear areas when the danger from ground attack is remote or when the warning service will insure the availability of sufficient time to construct foxholes. (See also FM 7-10.)

72. ANTIMECHANIZED DEFENSE. *a.* In providing for antimechanized defense, full advantage will be taken of both natural and artificial obstacles; mines will be laid when made available. The locations of mines and other obstacles will be coordinated with rifle, carbine, antitank grenade, and rocket launcher fire by the responsible leader in the locality organized. Action of individuals is as described in FMs 7-10 and 7-35.

b. For the employment of antitank guns in the defense of bivouac and assembly areas, see par. 129 and FM 7-35.

73. ANTIAIRCRAFT DEFENSE. Measures taken for antiaircraft defense include warning, concealment, camouflage, dispersion and fire. Upon receipt of warning of the approach of hostile aircraft, troops in position, bivouac, or billets, and, in general, foot troops on the road, immediately seek concealment and defilade. When time of warning permits, marching troops deploy off the road and continue the march. Motorized and mechanized units continue the march. When secrecy is possible and is of paramount importance, troops will remain motionless after taking cover. If secrecy is impossible or is not of paramount importance, all suitable weapons are fired against low-flying hostile aircraft. *No aircraft will be fired upon unless it has been clearly recognized as hostile or is positively identified as hostile, or attacks with bombs or gunfire. Troops will fire only upon order of an officer or responsible noncommissioned officer. Commanders of all echelons are personally responsible that the above restrictions are observed.* (See also FM 100-5.)

Chapter 4

BATTALION MEDICAL SECTION

74. REFERENCES. For composition and duties of the regimental medical detachment, see T/O and E 7-11 and FM 7-30. For details of medical supply and operations of the battalion medical section, see FM 8-10. The process of evacuation of casualties is shown in figure 3.

75. COMPOSITION. The battalion section of the regimental medical detachment comprises the personnel and vehicles provided by the current T/O and E 7-11 and forms a component part of the battalion trains. (See par. 82.) The Table of Organization and Equipment indicates the duties of each individual assigned to the section.

76. MISSION. The battalion medical section serves the battalion by establishing and maintaining preventive medical and sanitary measures and appropriate medical, surgical, and dental treatment in garrison, bivouac, on the march, and in combat. During combat, it evacuates sick and wounded personnel to the battalion aid station, where they are received, sorted, and given temporary care and such emergency treatment as limited facilities will permit. Cases requiring further treatment are evacuated to collecting stations by collecting units of the division medical battalion.

77. DUTIES OF COMMISSIONED PERSONNEL. For duties of the battalion surgeon, see paragraph 19. The duties of the medical assistant are to assist the battalion surgeon in emergency medical treatment and to conduct reconnaissance for aid station sites when so directed. He may be in charge of the supply and transportation of the battalion medical section.

78. COMPANY AID MEN. Three company aid men are attached to each lettered company when on the march, in bivouac, or in combat. The respective company commanders attach one company aid man to each rifle platoon and to each

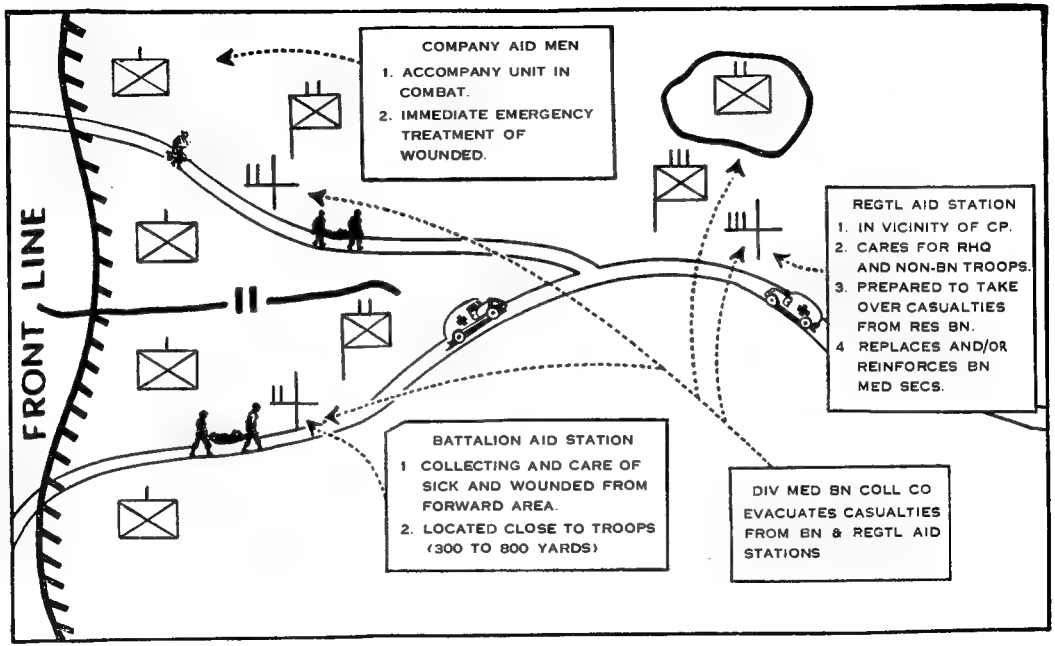

Figure 3. Evacuation of sick and wounded (schematic).

platoon of the heavy weapons company. Their duties are as follows:

a. To accompany the platoon to which they are attached.

b. To send information to their battalion surgeon by litter bearers and walking wounded. This information includes the location of the platoon, any contemplated changes in location or disposition, and the approximate number and location of casualties in the platoon area.

c. To administer emergency medical treatment.

d. To inform sick and walking wounded of the exact location of the aid station and the route thereto.

e. To place all seriously wounded in defiladed locations along the route of advance. To examine and tag the dead, and mark the location.

79. LITTER BEARER GROUP. The litter bearer group provides squads of litter bearers. Four-man squads are usually used. In combat the litter bearers evacuate to the battalion aid station all non-walking wounded within the battalion zone or area. The vehicles of the section are utilized to assist the litter bearers in those areas which are comparatively free from aimed small-arms fire.

80. AID STATION GROUP. The aid station group establishes and operates the battalion aid station; emergency medical treatment is given. Only minor surgical procedures are attempted, and then only when immediately imperative. Non-walking casualties requiring evacuation to hospitals are held at the aid station until picked up by litter bearers or ambulances from the division collecting company. Walking wounded are directed to division collecting stations. The slightly wounded are sent or escorted back to their companies.

81. EXPEDIENTS IN THEATER OF OPERATIONS. The exigencies of combat may require the use of civilian shelter, utilities, and transport for the care and evacuation of the wounded. Prisoners of war may be used for the evacuation of their own nationals. All available means for caring for the wounded within the battalion zone or area must be thoroughly exploited.

Chapter 5
ADMINISTRATION

Section I
BATTALION TRAINS

82. COMPOSITION. Battalion trains comprise the battalion section of the transportation platoon of the service company and the battalion section of the regimental medical detachment train. The battalion trains are composed of the personnel and vehicles provided by current Tables of Organization and Equipment. (See T/O and E 7-11.)

83. MISSION. During tactical operations, and when the battalion supply echelon is in operation, the mission of the battalion trains is to furnish supply, maintenance, and evacuation facilities for the battalion. For details, see section II of this chapter and FM 7-30.

84. DUTIES OF PERSONNEL. *a.* For duties of the battalion supply officer (S-4), see paragraph 13.

b. The battalion supply sergeant is the principal enlisted assistant to the battalion supply officer and works in the battalion area under the supervision of the latter.

c. The section truckmaster is responsible for the movement of vehicles entrusted to his charge.

d. Truck drivers are responsible for the habitual camouflage, concealment, defense, and first echelon maintenance of their vehicles.

Section II
SUPPLY

85. REFERENCES. For definitions, fundamentals, and methods relating to supply, see FM 100-10; for logistical data, see FM 101-10; for supply within the infantry regiment, see FM 7-30. For medical supply and evacuation, see chapter 4 and FM 7-30.

86. RESPONSIBILITY. Supply is a responsibility of command which cannot be delegated. When the regiment is in garrison or camp, supply is usually direct from regiment to companies; the battalion echelon of supply as such is then inoperative, but should function under regimental S-4 for training purposes. When the battalion echelon of supply is in operation, the battalion commander is responsible for the initial supply and the replenishment of all classes of supply to his battalion. He is responsible for submitting to the regimental commander an estimate of supplies needed for all the elements of his battalion. This estimate must insure an adequacy of supplies for his present or contemplated strength without creating an immobilizing surplus. Estimates or requisitions must be forwarded sufficiently in advance to enable the regiment to make supplies available for distribution in time to meet the requirements of the battalion. The battalion commander must use the means at his disposal to effect distribution.

87. MEANS. *a.* The battalion commander employs his staff, principally the battalion supply officer (S-4) and the motor transport officer, to assist him with supply. (See pars. 13 and 14.) He employs personnel of the ammunition and pioneer platoon to assist in ammunition supply. Supplies for battalion headquarters are furnished by the battalion headquarters company. (See Chapter 3.)

b. Transportation for supplying the battalion is furnished by the battalion trains and by company transport organic within the battalion. (See FM 7-30.)

88. CLASS I SUPPLY. *a. General.* (1) Rations and water are the principal items of class I supply for the battalion. These items are consumed at a relatively uniform rate irrespective of combat operations or terrain.

(2) The field ration may consist of field ration A, B, C, D, or K, the 10 in 1 ration, or combinations of these. For a description of these rations and their use, see FM 7-30.

(3) Troops should receive three meals daily. A minimum of two of these meals should be hot; the one-burner stove is

especially desirable for units in contact with the enemy and for detached posts. Plans for feeding troops are based upon the tactical situation, availability of vehicles, road net, traffic conditions, terrain, and weather. Methods of preparation and distribution of rations are discussed in FM 7-30. (See fig. 4.)

b. Battalion feeding plan. (1) During tactical operations, the kitchen and baggage train usually moves and bivouacs under regimental control. The battalion section of the train is released to battalion control when necessary. The regimental supply plan for feeding the troops prescribes the place and hour that kitchen vehicles will be released to the battalion and when and where they will be returned to regimental control. Based upon the regimental plan and the tactical plans of the battalion commander, the battalion supply officer formulates a plan for feeding troops. This plan includes—

(a) Attachment to companies (for rations) of units operating with the battalion which do not have messing facilities.

(b) Provision for feeding elements of companies in remote locations.

(c) Route and plan of movement for kitchen vehicles from the regimental point of release to the battalion point of release.

(d) Place and hour that kitchen vehicles will be released to companies and when and where they will be returned to battalion control.

(e) Route and plan for movement of kitchen vehicles to return them to regimental control.

(2) When the battalion commander has approved the plan, the battalion supply officer informs each company of the place and hour that kitchen vehicles will be released and when and where they are to be returned to battalion control. He arranges for company guides to meet the kitchen vehicles and conduct them to company mess locations (see fig. 4). For characteristics of desirable mess locations, see FM 7-10.

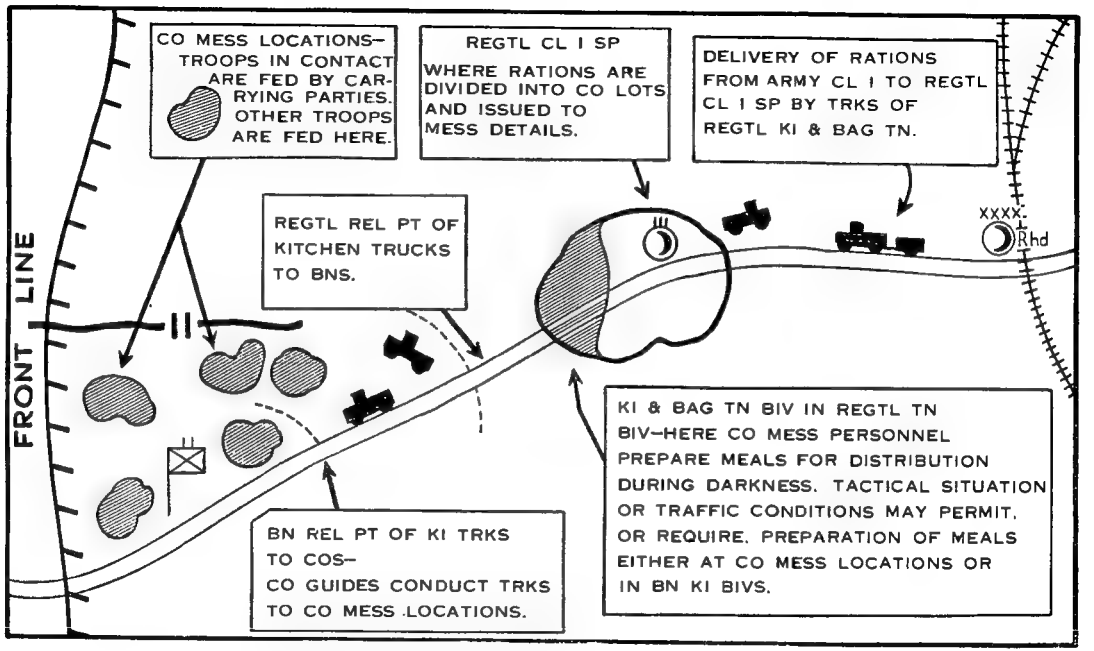

Figure 4. Ration distribution (schematic).

89. CLASS II SUPPLY. *a.* Class II supplies comprise articles for which allowances are established by Tables of Organization and Equipment and T/E 21. Type items are clothing, gas masks, arms, trucks, and items of signal equipment.

b. Clothing and equipment are ordinarily replaced during periods when the battalion is not engaged in combat.

c. During combat, requests for necessary replacements of weapons or other items of Class II equipment are dispatched by companies through the battalion commander using the most expeditious method. Requests for weapons, together, when practicable, with the damaged weapons to be replaced, are usually sent back by ammunition trucks; such replacements are delivered to the battalion ammunition supply point by the ammunition vehicles. Other class II items may be delivered in the train bivouac direct to company details which arrange to have the items carried forward.

90. CLASS III SUPPLY. *a.* Class III supplies include gasoline, lubricating oil, and grease. A reserve supply of gasoline is carried by each vehicle in 5-gallon drums. Since this is the only gasoline reserve carried by the regiment, a number of these drums may be removed from vehicles and utilized to establish a rotating supply of filled drums at supply points of the regiment and battalion. A reserve supply of oil and grease in 5-gallon containers is carried on battalion and company maintenance trucks and in the regimental maintenance section. During movement or in combat, regimental and higher headquarters will establish class III supply points, where resupply of gasoline may be made by exchange of empty for filled drums, or by direct filling of vehicle tanks from tank trucks.

b. During movement, these supply points are established along the route of march when necessary. During combat, individual vehicles of the battalion going to the rear refill at supply points established at the train bivouac or other convenient locations, such as the regimental ammunition supply point. For refilling vehicles which do not make trips to the rear, the battalion commander (usually through his supply

officer) may arrange for filled containers to be sent forward when meals are delivered to the troops.

91. CLASS IV SUPPLY. *a.* Class IV supplies comprise articles which are not covered in the Tables of Organization and Equipment and T/E 21, and for which demands are directly related to current or contemplated operations, except articles in classes III and V. Type items are fortification materials.

b. In defensive situations, when engineer tools and field fortification materials are furnished the battalion, tools and material will be released to the battalion on trucks at supply points accessible to the battalion. The battalion commander (usually through his supply officer) arranges for delivery of tools and material to companies. He also arranges for the return of tools when work is completed.

92. CLASS V SUPPLY. *a. General.* (1) Class V supplies include ammunition, pyrotechnics, and antitank mines. The amount of such supplies carried on weapon carriers and on the battalion ammunition train is that deemed necessary to initiate and sustain combat until replenishment from the rear can become effective.

(2) The battalion or regimental commander prescribes the amount of ammunition carried by the individual soldier and the amount initially carried on weapon carriers and the ammunition train. He also prescribes the amount of extra ammunition to be issued prior to combat and the amount to be maintained on vehicles of the ammunition train after such issue.

(3) The battalion commander prescribes the location of the battalion ammunition supply point and, in offensive situations, the route of ammunition advance. The battalion route of ammunition advance starts with the initial location for the battalion ammunition supply point, and continues to include a probable location from which to serve troops on the final objective. Its purpose is to insure that units of the attacking echelon which send back for ammunition will be able to locate the supply point, even though it may be in the process of displacing.

b. Initial supply. Prior to entry into combat the regiment releases to the battalion the battalion's section of the ammunition train and all company transport moving under regimental control. As soon as their need is foreseen, the battalion commander releases company transport to companies; he releases ammunition train vehicles to rifle units to issue extra ammunition or to dump loads on company defense areas. Usually extra ammunition is issued in the battalion assembly area before the battalion develops for combat. At the same time, ammunition train vehicles may be released temporarily to the heavy weapons company for the issue of mortar ammunition. *Upon completion of the issue or dumping of ammunition, ammunition train vehicles are returned to the battalion ammunition supply point.* The battalion S-4 is usually charged with controlling the ammunition train vehicles in initial supply. (See par. 13.) He may be assisted by the battalion motor transport officer. In defensive operations, in accordance with the regimental order, the battalion commander prescribes the amount of ammunition to be placed on the battalion defense area. The minimum amount so prescribed should be an amount estimated as sufficient to last until dark. (See fig. 5.)

c. Replenishment. (1) GENERAL. (a) The battalion ammunition plan must provide for replenishment in amounts and types which will suport the tactical situation. Often the ratio of types and amounts of ammunition requested by company commanders, to satisfy their immediate or future requirements, will vary from the normal loads of ammunition-carrying vehicles. The battalion S-4 is responsible for the delivery of ammunition to points selected by company commanders from which the company commanders can effect distribution. (See par. 68.)

(b) The battalion commander will keep the regimental commander informed of his requirements. (See par. 86.)

(2) BATTALION AMMUNITION SUPPLY POINT. The battalion ammunition supply point is located in the most advanced area that is practicable in the situation. The battalion S-4 establishes and operates the battalion ammunition supply point and organizes hand-carrying parties with

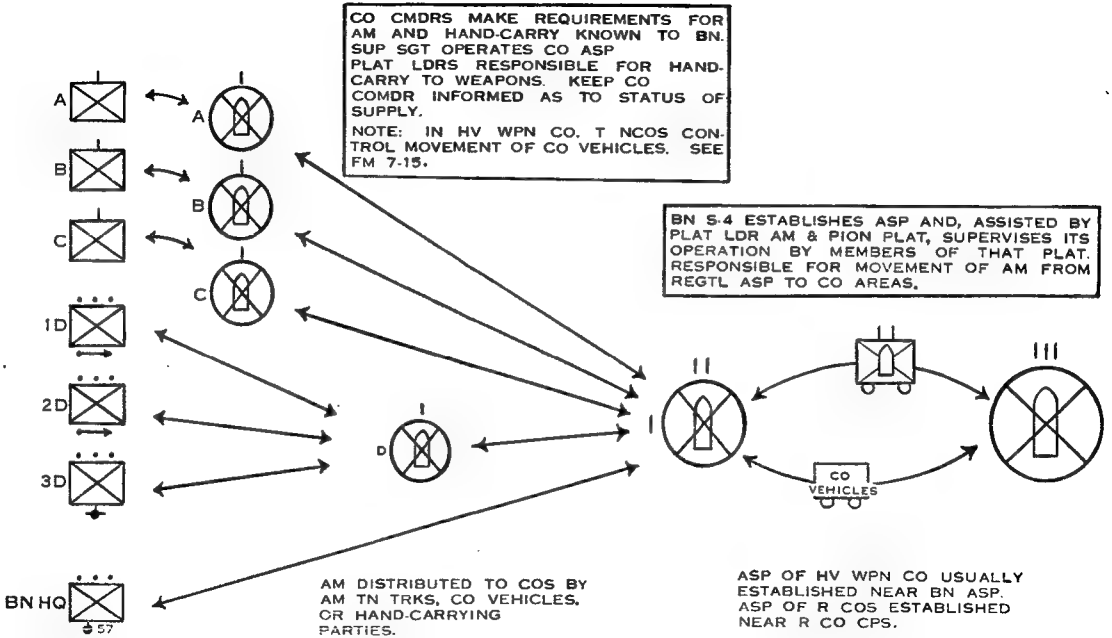

Figure 5. Ammunition supply, infantry battalion (schematic).

personnel furnished from the ammunition and pioneer platoon. He is also charged with its defense, using the same personnel for this purpose. In the attack, the battalion ammunition supply point is advanced by bounds along the route of ammunition advance prescribed by the battalion commander. Desirable characteristics of battalion ammunition supply points are—

(a) Convenience to the units served.

(b) Location at or in rear of a point where routes to subordinate units diverge.

(c) Facility of motor movement to the rear.

(d) Concealment from air and ground observation.

(e) Defilade from flat-trajectory fire and suitability for defense against air and ground attack.

(f) Ease of identification by day or night.

(g) Adequate space for truck turn-around and transfer of loads.

(3) CONTROL OF COMPANY VEHICLES. (a) Prior to entry into combat, company vehicles are released to company control.

(b) In general, the battalion commander (through the battalion motor transport officer) supervises, coordinates, and expedites the movement of company vehicles in rear of company areas. He assumes control of company transport when enemy activity or lack of concealment and defilade precludes its retention in company areas, or when it reports to the battalion ammunition supply point for refill. Company vehicles are returned to company control as soon as practicable.

(c) In defensive situations, company vehicles, whose presence is not essential on the battle position, are usually assembled under regimental control in or near the train bivouac. The tactical situation and the terrain permitting, a part or all of the company transport of a battalion in regimental reserve may be retained within the battalion area.

(4) OFFENSIVE OPERATIONS. (a) To maintain adequate stocks at the battalion ammunition supply point

from which replenishment to the companies can be effected, loads of partially emptied trucks are consolidated or unloaded in order to obtain empty vehicles for immediate dispatch to the regimental ammunition supply point. Loaded trucks are usually held at the battalion ammunition supply point until emptied or moved forward along the route of ammunition advance. As soon as emptied each ammunition truck is sent back to the regimental ammunition supply point for refill.

(b) Replenishment of ammunition to companies is effected by means of ammunition-carrying vehicles, supplemented by hand-carrying parties when necessary. Companies return emptied vehicles to the battalion ammunition supply point, where they are refilled or dispatched to the regimental ammunition supply point for refill.

(c) When conditions, such as unsuitable terrain or intensity of hostile fires, prevent the movement of vehicles over all or part of the routes to company areas, hand-carrying parties from the ammunition and pioneer platoon, or other personnel, are used to complete the movement of ammunition to company areas or to the weapons.

(d) The battalion motor transport officer assists in the replenishment of ammunition by supervising, coordinating, and expediting the movement of vehicles and hand-carrying parties forward of the battalion ammunition supply point.

(5) DEFENSIVE OPERATIONS. When the initial supply of ammunition has been placed in the battalion defense area (see par. b above), company and ammunition train vehicles are returned to the battalion ammunition supply point, where they normally revert to regimental control. They usually are refilled and held under cover at or near the regimental train bivouac. After dark, ammunition train and company vehicles are released to the battalion and brought forward to the battalion ammunition supply point. Replenishment of ammunition is effected in the same manner as in offensive operations. (See also par. 68*c*.)

(6) FAST MOVING SITUATIONS. (a) During fast-moving situations when considerable distances may separate

the battalion from supply points, ammunition requirements for the operation must be anticipated, additional transport secured, ammunition issued, and replenishment obviated so far as practicable.

(b) Plans for ammunition supply in retrograde movements must include provisions for an adequate amount of ammunition, without replenishment, for elements of the battalion with the covering force. Temporary ammunition supply points, when required, will be established along the route of withdrawal to provide replenishment for the remainder of the battalion.

93. ORDERS. *a.* Administrative matters in the battalion order may include such of the following items as are applicable:

(1) Hour and place of issue of extra ammunition.

(2) Location of the battalion ammunition supply point.

(3) Route of advance of ammunition (in attack only).

(4) Amount of ammunition to be placed on position (in defense only).

(5) Disposition of company transport or of train vehicles.

(6) Location of the battalion aid station.

b. Any additional directions of an administrative nature may be included in the order or issued later in fragmentary form to those concerned. These directions may include plans for feeding, instructions concerning supply of gasoline and oil, and disposition of individual rolls.

94. INDIVIDUAL ROLLS. On the march, the individual rolls of units of the battalion may be transported in kitchen and baggage train vehicles when part of organic loads have been dumped. Rolls are delivered to units during long halts when the duration of the halt and weather conditions warrant. During offensive combat, rolls are usually sent forward with supper and collected after breakfast. In defensive situations, the men often may keep individual rolls with them. The battalion commander (usually through the bat-

talion S-4) makes the necessary arrangements for the transportation of rolls and for their delivery and collection.

95. EXPEDIENTS IN THEATER OF OPERATIONS. *a. Exploitation.* Efficient use must be made of all resources in the battalion area to supplement supply and to provide for deficiencies when the normal means for procurement and distribution of supplies are inoperative or partially inoperative. Troops must be trained to load, lay, and fire captured weapons in general use by the enemy; and to effect minor repairs and operate captured enemy transport, both mechanized and motorized, in the theater of operations.

b. Battlefield recovery of vehicles, weapons, and other supplies. Means within the battalion must be employed to recover vehicles, both our own and those of the enemy, which are serviceable or can be made serviceable within the combat zone before the fluctuation of battle permits the enemy to recover or destroy them. Individuals or crews may often find it expedient to use available enemy weapons and ammunition; it must be borne in mind, however, that because of the distinctive sounds and appearance of these weapons, there is a probability that troops using them will be mistaken for the enemy unless nearby friendly troops are promptly informed of such use. Usable stocks of all types of supplies which are discovered within the battalion area must be safeguarded and higher authority immediately notified of the general type, amount, and location of such supplies.

c. Destruction of serviceable or reparable vehicles and usable supplies. Troops must be trained in quick, effective methods for the destruction of materiel and supplies of all types. In the case of weapons and vehicles, efficient destruction will require further action than the mere removal of certain working parts; one or more vital parts must be damaged beyond repair. On like weapons and vehicles, the same parts should receive this treatment. If organic means are not included with vehicles, efficient methods must be improvised for their destruction and to render useless all other

types of supplies. The decision to destroy ordnance materiel in order to prevent its capture and use by the enemy is a command decision, and will be ordered and carried out only on authority delegated by the division or higher commander. For methods of destruction see FM 7-30. Prompt action will be taken to prevent serviceable equipment or usable supplies from falling into the hands of the enemy.

Chapter 6

TROOP MOVEMENTS AND SECURITY ON THE MARCH

Section I

GENERAL

96. REFERENCES. For the fundamental doctrines governing troop movements, see FM 100-5. For technical and logistical data pertaining to troop movements, see FM 101-10. For operation of regimental trains, see FM 7-30. For detailed treatment of motor movements, see FM 25-10. For details of march hygiene, see FM 21-10. For forms for march orders, see FM 101-5. For details of infantry troop movements and march technique, see FM 7-40.

Section II

DAY MARCHES

97. GENERAL. The battalion may form part of the main body, it may be detailed as a security force of a larger unit, or it may move as an individual unit. When the battalion forms part of the security force of a larger unit, it may be detailed as the advance, flank, or rear guard.

98. AS PART OF MAIN BODY OF A LARGER FORCE. When part of the main body, the battalion conducts its march in accordance with the orders of the column commander or the provisions of standing operating procedure. The motor elements of the battalion usually march under regimental control in a separate serial. Normally only such vehicles march with the battalion as are required for command, reconnaissance, communication, and antiaircraft and antimechanized protection. Machine guns employed for antiaircraft protection may be distributed throughout the battalion or advance by bounds on the flanks of the battalion if terrain permits, or may advance by working forward through the column to critical points previously recon-

noitered. The antitank platoon may be held under regimental control for the protection of the regiment as a whole; otherwise it is disposed by the battalion commander for the protection of the battalion, usually by distributing squads throughout the column. The battalion sends patrols to the flanks to furnish ground security and function as air-antitank guards, and requires that each subordinate unit designate men to transmit warning signals.

99. AS ADVANCE GUARD OF A LARGER FORCE. *a. Mission.* The mission of the advance guard battalion is to prevent unnecessary delay of the main body and to protect it against surprise and ground observation from the front. The advance guard battalion insures for the main body the possession of key terrain features dominating the route of advance, or the time and space required for its deployment for action. (See figure 6.)

b. Control. (1) The march order of the regimental or column commander prescribes the composition of the advance guard, initial point, route or zone of advance, objective of the march, hour it will clear the initial point, distance at which the main body will follow, and any special instructions required, such as successive terrain features to be seized along the route or zone of advance.

(2) Basing his order upon that of the regimental commander, the battalion commander prescribes the formation of the advance guard, including attached units, and issues such instructions concerning security and reconnaissance measures and the conduct of the advance as are not covered in standing operating procedure. When contact with the enemy becomes imminent, he joins the support commander to gain first-hand information upon which to base his direction of the advance guard action. When the battalion commander leaves the vicinity of his command post at the head of the reserve, he takes with him a radiotelephone and a motor messenger for prompt communication with his command post and with his companies. When contact becomes imminent, he takes his S-3, heavy weapons company commander, and field artillery liaison officer, if artillery elements are with the main body.

c. Reinforcements. The advance guard battalion is usually reinforced by elements of the intelligence and reconnaissance

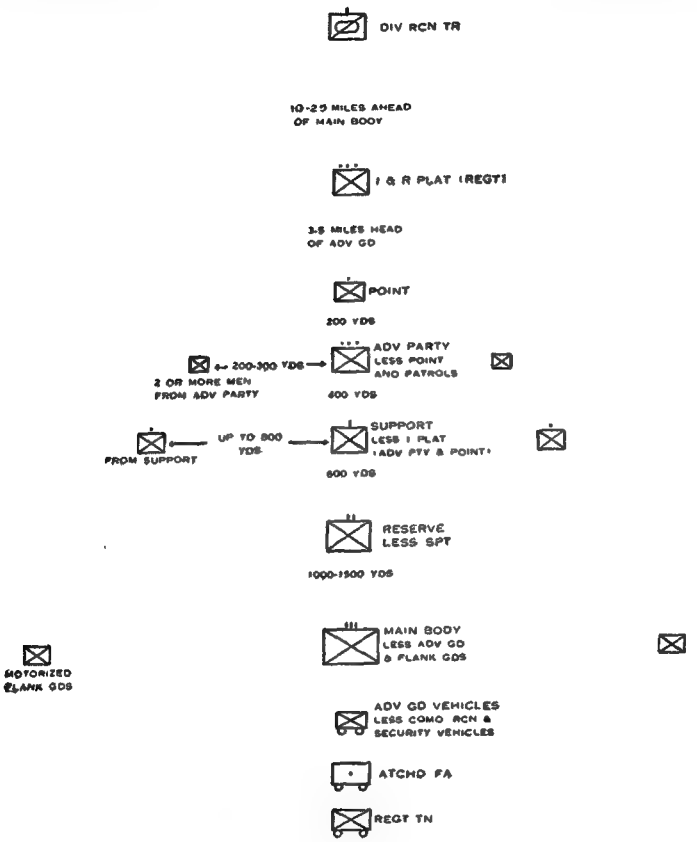

Figure 6. Advance guard battalion in route march (schematic).

platoon, the antitank company, the cannon company, and a detachment of engineers. Tanks and tank destroyer elements may also be attached. Artillery support usually is furnished

by units with the main body. If the artillery with the main body cannot support the advance guard, some artillery is attached. The artillery of the advance guard is located so that it can enter action promptly, and so that other elements of the advance guard can protect it from surprise enemy attacks. The commanders of the advance guard artillery and cannon platoon, if attached, march with the advance guard commander. Engineer and cannon platoon personnel, the antitank platoon leader, or other personnel designated by him, and reconnaissance and survey personnel of advance guard artillery accompany the leading elements of the column. When the advance guard deploys, its artillery occupies positions to cover the deployment. (See FMs 6-20, 7-37, and 7-35.)

d. Formation. From front to rear the advance guard battalion is divided usually into a motorized detachment composed of battalion intelligence personnel or elements of the regimental intelligence and reconnaissance platoon, a point, an advance party, a support, and a reserve. When contact is not imminent and the bulk of the advance guard is able to march in route column on a two-way road, its vehicles not employed for command, reconnaissance, security, and control usually move by short bounds in rear of the foot troops of the main body under control of the battalion motor transport officer. He maintains communication with the battalion commander by voice radio and motor messenger. On roads not favorable for passing, vehicles may follow the column of advance guard foot troops.

(1) MOTORIZED ELEMENTS. When under control of the advance guard commander, the elements of the regimental intelligence and reconnaissance platoon precede the leading foot elements by from three to five miles. They halt for observation on successive vantage points. Routes leading from the flanks as well as from the front are observed. Communication with the advance guard commander is maintained by voice radio and motor messenger. When the elements of the intelligence and reconnaissance platoon which precede the advance guard operate under regimental control, the advance guard commander maintains contact with them, usually by

a liaison officer. Reconnaissance troop elements under division control may precede the advance guard by 10 to 25 miles; the infantry motorized reconnaissance elements are informed of their presence and location. (See FM 7-40.)

(2) SUPPORT. The support is usually a rifle company. It sends forward the advance party. Vehicles of the support, when not under battalion control, follow the foot elements by bounds. The advance party sends forward a point, the leading foot element; the point attacks without hesitation enemy forces appearing within effective range. (See FM 7-10.) Motor messengers and supporting weapons may be attached to the support. Supporting weapons may include heavy machine guns, 81-mm mortars, and antitank guns. Foot elements of engineers, or, if engineers are not attached, elements of the battalion ammunition and pioneer platoon, usually march with the advance party.

(3) RESERVE. The reserve constitutes the principal maneuvering and offensive element of the advance guard battalion. The march command post of the battalion is usually at or near the head of the reserve. Advance guard artillery and cannon company elements follow the reserve by bounds.

(4) PATROLS. The advance guard sends out foot and motorized patrols to the flanks to reconnoiter those points which afford extended observation of the main body, or which provide concealment for hostile reconnoitering or harassing detachments, including armored vehicles. Foot patrols ordinarily are sent out under direction of the support commander, either directly from the support or (to points close to the route of march) from the advance party. Motorized patrols are sent out from the reserve.

(5) ANTIAIRCRAFT SECURITY ELEMENTS. The machine-gun platoons of the heavy weapons company furnish antiaircraft security for the foot elements of the advance guard battalion; caliber .50 machine guns furnish protection to motorized elements. Heavy machine guns may be distributed throughout the depth of the column, or may furnish protection by successive displacement of sections to firing positions adjacent to the route of march. Guns are mounted

in vehicles and manned by minimum operating crews. Air-antitank guards occupy successive points near the route of march. These guards are detailed from both the support and the reserve. When they fall behind the advancing column, they join the tail of the reserve; additional guards are sent out as required. Flank patrols also act as air-antitank guards.

(6) ANTIMECHANIZED DEFENSE ELEMENTS. The battalion commander disposes his antitank weapons according to the terrain, the hostile mechanized threat, the location of friendly troops, and rates of march (foot or motorized). Antitank guns may be distributed as follows:

(a) Guns may be advanced from one suitable firing position to another, so as to afford continuous antimechanized protection to the marching column. In such movements, they are given priority on roads, and move rapidly to successive positions.

(b) When such employment is impracticable, as in a motorized movement, the guns are distributed in the support and reserve so as to afford protection throughout the advance guard.

e. Operation of advance guard battalion. (1) The advance guard battalion accomplishes its mission by reconnoitering the terrain to the front and on each side of the line of march, overcoming isolated hostile resistance, and preparing, so far as practicable, the route of advance by removing obstacles and by repairing bridges or constructing detours. The regimental intelligence and reconnaissance platoon, and foot and motor patrols furnish the battalion commander prompt information of hostile forces. Aviation may also be made available. For short halts, observers from the forward elements are sent to nearby points of observation to cover the front and flanks. During long halts, units of the support occupy critical terrain features controlling the approaches to the column. These positions are organized as for a bivouac outpost and reconnaissance is initiated. (See par. 110.)

(2) When contact with the enemy in force becomes imminent, or when entering the zone of effective hostile artillery

fire, the support moves forward on a broad front. The reserve may be ordered to adopt a partially deployed formation. Company vehicles are brought forward and released to companies. When the enemy is encountered in sufficient strength to justify such action, the support promptly attacks or seizes favorable terrain according to the mission assigned the advance guard. The battalion commander directs the employment of the heavy weapons company and attached units, such as cannon company, antitank company, artillery, engineer, tank, and tank destroyer elements; and informs the artillery liaison officer of support desired from available artillery in the main body.

(3) The mission assigned to the advance guard in the regimental march order determines the action to be taken by the advance guard commander upon encountering strong hostile resistance. The advance guard mission may require defensive or delaying action against a greatly superior force. Usually the mission is aggressive. The attack of an advance guard is executed on a broad front, with the bulk of the reserve committed to action. It is delivered promptly to drive the enemy out of position or seize a terrain feature that will cover the deployment of the main body.

100. AS FLANK GUARD OF A LARGER FORCE. *a. Mission.* The mission of the flank guard battalion is to protect the marching column from ground observation and surprise attack from the flank and, in the event of an attack in force, to provide the necessary time and space for the development of the main body or for its uninterrupted passage.

b. Reinforcement. The reinforcements of the flank guard battalion may include personnel of the intelligence and reconnaissance platoon, a cannon platoon, artillery, engineers, tanks, chemical troops, and, when the hostile mechanized threat is great, antitank company and tank destroyer elements. The employment of these reinforcing units is generally the same as the employment of similar units with an advance guard. The flank guard battalion may be given special material, such as antitank mines and chemical ammunition,

and the means for constructing obstacles and executing demolitions.

c. Operations. On the march the formation of the battalion and its conduct of antiaircraft security and antimechanized defense are similar to those of the advance guard battalion [par. 99*d*(5) and (6)]. The flank guard battalion employs the necessary patrols and advance, flank, and rear guards for its own protection and to give timely warning of the approach of hostile forces. It takes advantage of terrain features such as stream lines, ridges, and defiles on the exposed flank, in establishing road blocks and preparing demolitions. Its operations are conducted with special reference to the routes which favor attack against the flanks of the command. When the locality from which an attack is expected is well defined, the flank guard battalion occupies a position covering the routes of hostile approach until the main body has passed and, on completion of its mission, joins the rear of the main body. When a route generally parallel to the line of march of the main body exists, the battalion may move on that route, distributed in detachments over sufficient depth to offer resistance at various points. If the battalion is motorized, echelons of the battalion may move by bounds from one position to another.

101. AS REAR GUARD OF A LARGER RETIRING FORCE. *a. Mission.* A battalion may be employed as the rear guard of a retiring force with the mission of protecting the main body from harassment and attack. By the successful execution of this mission the battalion enables the main body to avoid battle and regain freedom of action. It must execute its mission without help from the main body.

b. Strength and composition. The rear guard battalion should be especially strong in artillery; if acting as rear guard of a division, at least a battalion of artillery is usually attached. (See FM 6-20.) Cannon company elements are well suited as reinforcements. (See FM 7-37.) Antitank elements, tanks, engineers, chemical troops, and motor transport for

foot elements may also be attached. Elements of the regimental intelligence and reconnaissance platoon may be attached for employment on reconnaissance and security missions; otherwise the battalion commander uses such motor transport as is available to organize the necessary motor patrols for these missions. A sufficient number of vehicles should be made available to the battalion commander for placing motorized patrols or detachments on exposed flanks.

c. Formation. When the distance from the enemy permits, the rear guard battalion moves in march formation in the reverse order of an advance guard battalion. The successive elements, starting with the one nearest the enemy, are one or more motor patrols, a rear point, a rear party, a support, and a reserve. The support sends out the rear party which, in turn, sends out the rear point. The strength of each subdivision corresponds, in general, to that in an advance guard battalion. When a rear guard battalion moves on foot, the motor echelon, moving by short bounds, precedes the foot elements of the reserve. The battalion antitank platoon may be distributed in the column, or disposed with a squad moving by bounds on each flank of the rear guard to prevent its encirclement by hostile mechanized forces. If additional guns are attached, two or more may be placed on each flank. (See FM 7-35.)

d. Operation. (1) The rear guard battalion opens long-range fire with its infantry heavy weapons, antitank guns, cannon company howitzers, and artillery in order to force the enemy to deploy and thus delay him. Antitank guns are placed in positions from which they can fire on hostile armored vehicles before those vehicles can disrupt the progress of the rear guard or break through it and strike the main body. Unless the security of the main body requires a defense in place, the rear guard battalion conducts itself as in a delaying action on successive positions. (See ch. 10, sec. IV.)

(2) Engineers, if available, and the ammunition and pioneer platoon are employed to execute demolitions (such as the destruction of bridges and roads passing through defiles), to construct obstacles, and to keep open routes of withdrawal. Chemical troops execute appropriate smoke missions, such

as the screening of withdrawing elements, and high explosive mortar fire missions; they are prepared to contaminate obstacles and demolitions.

(3) Antiaircraft security and antimechanized defense are conducted as for an advance guard [par. 99*d*(5) and (6)]. All troops must be prepared to lay and remove mines in blocking avenues of tank approach.

102. BATTALION MARCHING ALONE. The battalion conducts an independent march in accordance with the principles and technique prescribed for the regiment. (See FM 7-40.) The commander of a battalion marching alone details the necessary detachments for security.

a. Strength and composition of advance guard. The advance guard usually consists of a rifle company reinforced by any or all of the following:

(1) One squad of the antitank platoon.

(2) A detachment of the heavy weapons company.

(3) A detachment of the ammunition and pioneer platoon, depending upon the condition of roads and the availability of engineers.

(4) Engineer and intelligence and reconnaissance platoon troops, if attached to the battalion.

b. Formation. The advance guard is organized as a support which sends forward an advance party, which in turn sends out a point, in the same manner as when the battalion is the advance guard of a larger force. The support also sends out patrols to operate on a broad front. The battalion follows the advance guard at approximately 500 yards, thus permitting the main body to effect deployment without casualties from enemy machine-gun fire.

c. Flank security. The battalion secures its flanks by flank guards and by the patrols sent out from the advance guard. Flank guards seldom exceed the strength of one rifle platoon reinforced by a heavy machine-gun platoon, an 81-mm mortar section, a squad of the antitank platoon, and a squad of the ammunition and pioneer platoon. Such flank guards

operate in the same manner as do flank guards of larger units.

d. Rear guard. When advancing toward the enemy, a rear guard seldom exceeds in strength a reinforced rifle platoon and may consist of only a rifle squad. It is normally motorized and follows the motor echelon. In retrograde movements it may consist of a rifle company, reinforced as indicated in *b* above. It is formed as a support which sends back a rear party, which in turn sends back a rear point.

103. TRAINING FOR ENDURANCE. Troops must be trained to march 20 miles a day for several successive days without undue fatigue. Upon occasion troops will be required to march as much as 35 miles in 24 hours and arrive at their destination fit for combat. In training areas and in rear areas of the combat zone, the battalion commander so conducts training that his unit achieves and maintains a high standard of proficiency in marching. For march technique, see FM 7-40.

Section III

NIGHT MARCHES

104. NIGHT MARCHES. Night marches are conducted by the battalion in accordance with the principles governing the regiment. (See FM 7-40.)

a. Control. (1) To insure maintenance of direction, the battalion commander provides guides and route markers when these are not provided by higher authority, designates the officer to lead the battalion column(s) and employs his staff to supervise the march.

(2) The battalion commander prescribes the countersign and the identifying marks to be worn by subordinate commanders, security elements, and messengers. The term *countersign* includes the challenge (when secret), the password, and the reply. The *challenge* is a word or distinctive sound used to cause an unidentified person or party to halt and identify himself (itself). The challenge may or may not be

secret. The word *halt* is the challenge unless a secret word or sound is ordered. The *password* is a word or distinctive sound used as an answer to the challenge and which identifies the person or party desiring to pass. The *reply* is a word or distinctive sound used by the challenger in identifying himself to a challenged person or party after receiving the password. The password and reply are always secret. (See also FM 21-75.)

b. Security. The strength of an advance guard for the battalion during the night march may vary from a rifle platoon to a rifle company reinforced with engineers or elements of the ammunition and pioneer platoon. Flank and rear security detachments are usually smaller than for day marches, and consist of rifle units and engineer or pioneer elements. The battalion may constitute a security force for the regiment or larger unit.

Section IV

MOTOR AND RAIL MOVEMENTS

105. MOTOR MOVEMENTS. *a.* For details of operation, inspection, maintenance, and management of motor transport and the training and duties of operating, maintenance, and traffic personnel, see AR 850-15, FM 25-10, FM 100-5, TM 9-2810, TM 21-300, TM 38-250. For general doctrines governing shuttling, see FM 100-5. For logistics of motor movements, see FM 101-10. For details of motor movements of the infantry regiment, see FM 7-40. For details of traffic control and circulation, see FM 101-15.

b. Motor movements made by the battalion are governed by the principles prescribed for the regiment in FM 7-40.

c. When entrucking can be accomplished under cover of darkness, battalion (and company) entrucking points may be used. (See fig.7.)

d. If a battalion must be entrucked in daylight, vehicles should not remain in column on or along the side of a road while troops and equipment are being loaded, even if protected by natural concealment, hence entrucking areas and

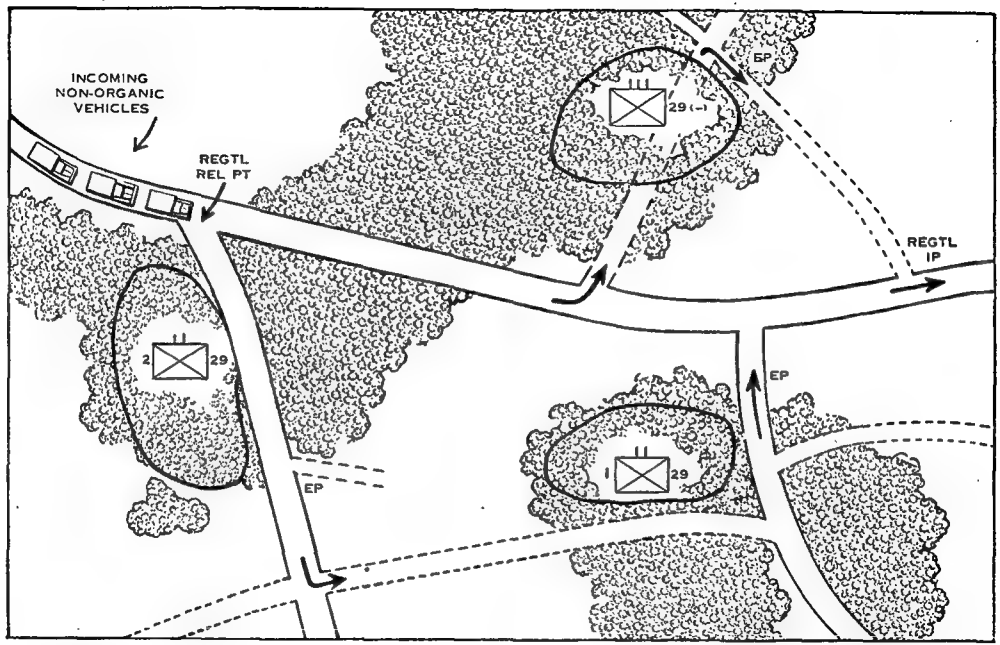

Figure 7. Routing of vehicles for motor movement of regiment during darkness

initial points are designated for companies in order to insure orderly loading and movement to the battalion (or regimental) initial point. (See fig. 8.) Concealment and dispersion are used to afford passive protection during entrucking.

106. RAIL MOVEMENTS. For general procedure governing rail movement, see FM 100-5. For technical and logistical data pertaining to rail movements, see FM 101-10. For check list for orders and for entraining and detraining tables, see FM 101-5. For the general organization, operation, and control of rail transportation, see FM 100-10. For details of rail movements of a regiment, see FM 7-40. Usually the battalion making a rail movement will do so as part of the regiment; exceptionally, it will move alone by rail. When the battalion moves alone by rail, the duties of the battalion commander and his staff are similar to those prescribed for the regimental commander and staff. (See FM 7-40 and AR 30-945.) For duties and responsibilities of personnel and for reference data, see Troop Train Commanders Guide, War Department Pamphlet No. 20-7.

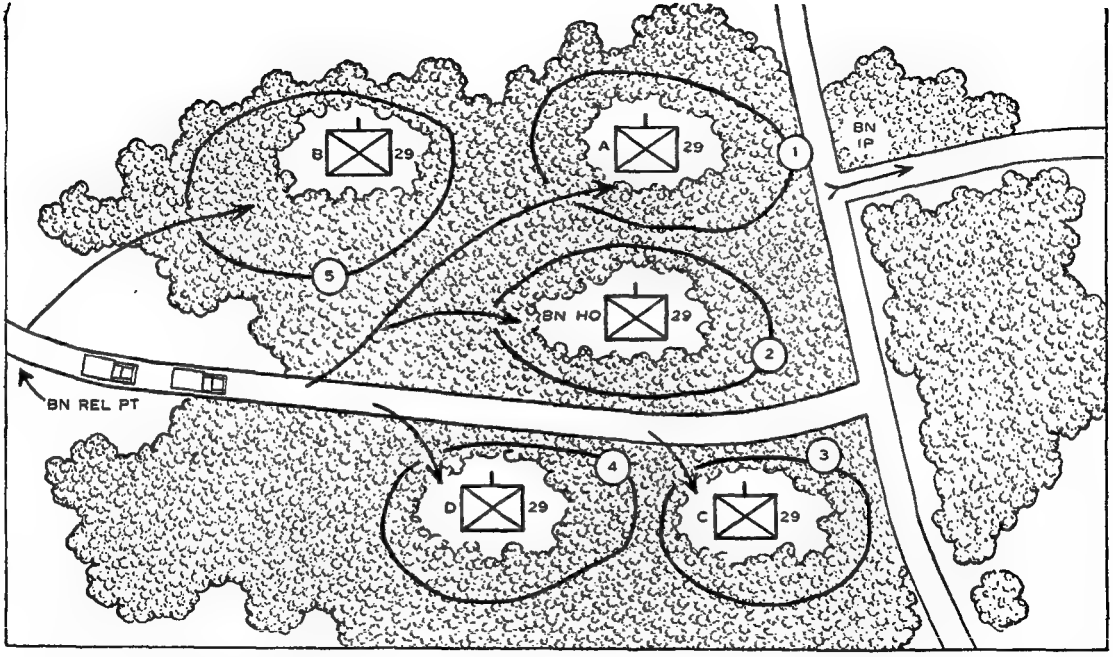

Figure 8. Daylight entrucking area of one battalion showing company entrucking areas. Company initial points are indicated by numbers in this figure.

Chapter 7
BIVOUACS

107. GENERAL. The battalion bivouac area is usually selected by the regiment. The distribution of units in the area should be made so as to facilitate the succeeding operation. For the requirements of bivouac sites, see FMs 7-40 and 100-5.

108. QUARTERING PARTY. *a. Composition.* When the battalion is adequately protected by covering forces, a quartering party is sent forward to select the exact site, if not already determined, and to make interior arrangements for the bivouac. The quartering party comprises generally—

(1) A quartering officer, usually the battalion adjutant.

(2) A guide party from each company of the battalion and each attached unit. The party consists of an officer and one or two enlisted assistants, depending on the size of the unit. The guide party from the heavy weapons company should include a member qualified to assist in early reconnaissance for security positions.

(3) When the battalion is operating alone, a medical officer, if available.

b. Duties. (1) The battalion quartering officer with his party accompanies the regimental quartering officer and operates under the direction of the latter. He subdivides the battalion bivouac area and allots space to subordinate units and to the battalion command post. When kitchens are released from regimental control, he locates them within the battalion area; he designates latrine locations as far as practicable from all kitchens. Upon the arrival of troops he reports to the battalion commander.

(2) Shortly before the troops are due to arrive, the battalion quartering officer assembles the company and unit representatives at the point where the troops are to leave the route of march to enter the bivouac area. Representatives meet their units, including vehicles with the motor echelon, and without halting the movement, in order to avoid blocking roads, lead them to their respective areas.

(3) When the battalion is operating alone, the quartering officer reserves locations for the aid station and the interior guard and plans the disposition of the guard. The surgeon examines and marks the places for obtaining water for drinking and cooking, for bathing, and for washing clothes; he makes recommendations concerning the location of kitchens and latrines, and concerning the other details of sanitation. When the guard is detailed, the quartering officer sees that it is posted for the interior security and control of the area (sentries over water sources and at entrances into the area). Unit representatives function as indicated in (2) above. The quartering officer prepares a hasty area sketch showing the sub-areas and installations for the information of the battalion commander.

(4) When there is a likelihood of hostile air or mechanized attack the quartering officer will include in his reconnaissance the selection of tentative locations for the battalion antiaircraft and antimechanized weapons. At the first opportunity he will inform the antitank platoon leader and heavy weapons company commander of these tentative locations.

109. BATTALION WITHIN REGIMENTAL BIVOUAC AREA. *a. Security.* When the battalion occupies a bivouac area within the regimental area, the regimental commander usually details the interior guard and coordinates the antiaircraft security and antimechanized defense of the area. The battalion commander requires all individuals to dig foxholes for occupancy in case of hostile air or mechanized attack. He also requires emplacements to be dug for all machine guns, mortars, and antitank guns.

b. Alerts. (1) One officer at the battalion command post and at each company command post, and one noncommissioned officer in each platoon are constantly on duty to alert the battalion in case of attack.

(2) The battalion commander instructs all units of the battalion as to the action to be taken when alerted. The action usually is prescribed in the standing operating procedure of the unit.

c. Signal communication. (1) Communication within the battalion bivouac area is usually maintained by foot or motor messenger. Units of the battalion establish command posts within their respective areas and notify the battalion commander and their own subordinate units of the location. Company messengers, who are familiar with the route to their own company command posts, are held readily available at the battalion command post. Sound-powered telephones may be employed.

(2) The regimental commander usually maintains communication with the battalion by foot and motor messengers; wire is not installed unless the length of stay and distance between command posts justify it. Radio is employed only when authorized by the regimental commander.

d. Control and motor elements. Vehicles within the battalion bivouac area are controlled as directed by the battalion commander. They are dispersed, if practicable, with a minimum of 75 yards between vehicles. Vehicles are parked irregularly and concealed or camouflaged. At night, each vehicle moving within the bivouac area must be preceded by two men on foot to prevent running over sleeping personnel.

(1) *Company transport.* Company vehicles are usually parked in their respective company areas.

(2) *Battalion trains.* Kitchen and baggage trucks are usually released to companies upon arrival in the bivouac area. The battalion section of the ammunition train, if present, is parked as directed by the battalion commander.

110. BATTALION AS BIVOUAC OUTPOST. *a. Mission.* The battalion may be detailed as the bivouac outpost of the regiment or division, or as part of the division bivouac outpost. A bivouac outpost is charged with the protection of the bivouac against hostile surprise, annoyance, and observation by enemy ground forces. The regimental or higher commander designates the outpost sector of responsibilities upon the basis of the best available information of likely enemy approach. (See FMs 7-40 and 100-5.)

b. Control. (1) The commander of a battalion assigned to outpost duty will receive his instructions from a higher

commander. These instructions include the designation of the outpost line of resistance, the limits (if any) of the battalion outpost position or sector, any detached posts to be established, action to be taken if the outpost is attacked in force, special reconnaissance to be executed, approaches to be especially guarded, signal communication to be established, and coordination with adjacent units (if any) of the outpost.

(2) The advance (or rear) guard battalion assigned outpost duty may reconnoiter and occupy the outpost position under the protection of a march outpost provided by its support. The reserve will usually occupy the outpost line of resistance. The support will be withdrawn to become the reserve of the outpost battalion when occupation of the outpost line of resistance is complete.

c. Strength and composition. A battalion detailed as a bivouac outpost is ordinarily reinforced by the attachment of antitank and cannon company elements. Its defense may be supplemented by the employment of engineers, or the mine platoon of the antitank company, for construction of mine fields and other obstacles. Artillery support for the outpost usually is provided by artillery with the main body at the rate of one battalion of light artillery per infantry battalion of the outpost. If the outpost is operating at such distance from the main body that it cannot be supported by the artillery with the main body, necessary artillery should be attached. Elements of the regimental intelligence and reconnaissance platoon, as well as additional vehicles, may be attached to the battalion to be used for distant patrolling.

d. Organization. (1) The elements of an outpost battalion from front to rear are: motorized detachments or patrols, outguards, supports, and a reserve.

(2) The outpost line of resistance is subdivided into support areas. Supports are numbered from right to left; they vary in size from a rifle platoon to a rifle company and are reinforced by attached heavy weapons and antitank guns. Supports organize and occupy all-around defense areas. Small groups (outguards) are posted by the supports to maintain observation over the support sector.

(3) The size of the reserve depends on the width of the outpost sector and the mission. If the mission is delay, only a small reserve need be held out. If the mission is to hold the outpost line of resistance, a larger reserve is designated. The reserve usually will not exceed a rifle company.

(4) Some heavy machine guns usually will be attached to the supports. (See FM 7-15.) Heavy machine guns given the primary mission of antiaircraft defense during daylight hours usually remain under control of the outpost commander. Such guns may be moved and attached to supports at night or during periods of reduced visibility. 81-mm mortars are emplaced to fire in support of the outpost line of resistance (line of supports). Artillery defensive fires are prepared. Antitank guns are disposed to cover approaches to the outpost position; guns with the reserve may be held mobile prepared to move rapidly to any one of several previously reconnoitered and prepared positions. Mines, if made available, as well as other obstacles, may be installed. The battalion commander maintains communication with the supports by wire, voice radio, and messenger.

(5) Patrols cover the foreground of the position and the intervals between the supports. Distant patrolling is conducted in accordance with instructions from higher headquarters.

(6) Company vehicles are with the outpost. When not making deliveries to forward areas, kitchen and baggage trucks and the battalion ammunition train usually remain with the regimental trains.

111. BATTALION OPERATING ALONE. When the battalion bivouacs alone, the battalion commander details the bivouac outpost and interior guard. He prescribes the necessary measures for antiaircraft security and antimechanized defense, and for the local protection of the battalion trains and the command post against attacks by small groups of the enemy who succeed in infiltrating the bivouac outpost.

a. Bivouac outpost. The bivouac outpost may consist of one rifle company and attached supporting weapons, or of parts of the several companies, assigned sectors in accordance

with their positions in the bivouac area. The outpost commander, detailed by name if troops from more than one company participate, is responsible for the all-around protection of the bivouac area. The outpost covers approaches to the area by locating detachments at critical points, establishing road blocks, and by patrolling. It normally does not hold out a reserve. Sufficient force for necessary patrols may be centrally located or the detachments may be required to do the necessary patrolling. Ordinarily the antitank platoon and not more than one platoon of heavy machine guns are attached to the bivouac outpost. The bivouac is so organized that in the event of attack, defensive positions may be manned with the minimum delay and confusion. Communication within the outpost may be made by wire, voice radio, and messengers.

b. Antiaircraft security. All heavy machine guns not attached to the outpost are employed for the antiaircraft protection of the bivouac area. The guns are emplaced in open spaces on high ground around the perimeter of the bivouac area. All guns are carefully camouflaged.

c. Antimechanized defense. The antitank platoon, when attached to the bivouac outpost, may be employed to assist in establishing road blocks, and to cover by fire likely approaches for hostile armored vehicles. Rocket teams cover approaches not covered by antitank guns. Exceptionally, the lack of enough guns to provide adequate all-around protection may require that the platoon be held mobile ready to occupy prepared firing positions. Mines, if made available, as well as other obstacles, may be installed.

Chapter 8
THE OFFENSIVE

Section I
GENERAL

112. REFERENCES. For fundamental doctrines of offensive combat, see FMs 100-5 and 7-40. For tactics of the rifle company and heavy weapons company, see FMs 7-10 and 7-15. For tactics of the battalion antitank platoon and the antitank company, and details of antimechanized defense, see FMs 5-30 and 7-35.

Section II
APPROACH MARCH

113. GENERAL. *a.* The approach march formation consists of small columns—squad, section or platoon—distributed in some depth and on a broad front; it is in effect a partial deployment. (See FM 22-5.) The approach march begins when the unit is forced off the roads by distant shelling, strafing, or the threat of these; and ends when the leading echelon crosses the line of departure or comes under effective small-arms fire. The battalion ordinarily initiates the approach march upon receipt of a development order from the regimental commander. (See FM 7-40.) However, when necessary to reduce losses from artillery or air attack, battalion commanders promptly initiate the development of their own units. The commander of an advance, flank, or rear guard battalion also initiates its development when necessary to increase readiness for action.

b. The approach march of a leading battalion by day is described in paragraphs 114 to 123, inclusive. The conduct of the approach march of a battalion in rear of the leading echelon of the regiment is described in paragraph 124. The conduct of a night approach march is described in paragraph 125.

114. ORDERS OF BATTALION COMMANDER. Depending upon his knowledge of the situation, the opportunity for prior reconnaissance, and the instructions received from the regimental commander, the battalion commander initially may issue complete instructions for the movement of the battalion to a final march objective, or he may issue partial instructions and supplement these instructions by fragmentary orders as the approach march progresses. The following outline indicates the matter, when appropriate, to be included in the battalion order:

BATTALION DEVELOPMENT ORDER

1. Information of the enemy and friendly troops.
2. Mission(s) and general plan of the battalion.

   a. Battalion assembly area (position) or other final march objective.

   b. Battalion zone of advance, or frontages and directions of advance for subordinate units.

   c. Phase lines (successive march objectives) and hours or conditions for continuing the march beyond each of these lines, or instructions for periodic reports of progress.

   d. Formation, designation of base company (if any), distance between successive echelons.
3. Instructions for subordinate units.

   a. Special instructions for leading company or companies, antitank weapons, heavy machine guns (including antiaircraft defense), and ammunition and pioneer platoon.

   b. General instructions for reconnaissance, security, and contact (connecting groups).
4. Instructions for control of motor transport (whether company vehicles are to be retained under battalion control or released to companies), route and method of movement of vehicles retained under battalion control.
5. Communication instructions.

   a. Index to signal operations instructions in effect.

b. Restrictions, if any, on use of radio.

c. Special pyrotechnic signals.

d. Location of march command post or its axis of advance.

115. ZONE AND DIRECTION OF ADVANCE. *a.* The regimental development order usually prescribes a zone of advance for the battalion. (See FM 7-40.) The battalion commander announces it in his field order by designating easily distinguished terrain features along the boundaries of the zone.

b. The battalion commander normally prescribes a frontage and direction of advance for subordinate units in order to regulate and control their movements; exceptionally, he may prescribe a boundary between leading rifle companies. He prescribes direction in terms of march objectives, a magnetic azimuth, or both. He may designate a rifle company as a base company on which other units guide; this designation ends at the line of departure.

116. MARCH OBJECTIVES AND PHASE LINES. *a.* A march objective is a recognizable terrain feature toward which a march is directed. Frequently, high ground, road junctions, structures, and like features identify usable march objectives. A phase line is a line generally perpendicular to the direction of advance and passing through the march objectives of several columns marching generally abreast. Usually, columns will be directed not to proceed beyond a given phase line until a specified hour, except on orders, or until the occurrence of a particular event. Thus, the phase line constitutes a means of control for the higher commander.

b. Distances between phase lines will depend largely upon the character of the terrain and conditions of visibility; to a lesser extent they depend upon the imminence of contact with the enemy. When contact with strong forces is imminent, the battalion must be able to protect, with its supporting weapons, the advance of its security elements to the next phase line. Hence, in open country, under conditions of normal visibility, phase lines may be from 1,000 to 2,000 yards apart;

when the terrain or visibility limits the observation of supporting weapons, phase lines should be closer together. When contact with strong forces is not imminent, phase lines in open country may be several miles apart.

c. When phase lines are not prescribed by the regimental development order, the battalion may be required to report its progress at stated times or time intervals. In such case the battalion commander may prescribe phase lines on his own initiative, or require reports of progress from his subordinate units. When phase lines are prescribed by the regimental order, the battalion commander may designate intermediate phase lines if required by conditions of the terrain or poor visibility. However, when the advance is made in a zone of normal width, with good visibility, in open terrain, intermediate phase lines need not be employed as long as the battalion commander is able to observe and control the movement or action while advancing generally abreast of his leading echelon.

117. FORMATIONS. *a.* The formation adopted will depend upon the terrain, the width of the zone of advance, and whether the flanks are exposed or are protected by adjacent units. A formation with one rifle company in the leading echelon, one echeloned to the right rear and one to the left rear is a suitable formation when neither flank is secure or when the situation indicates that prompt enveloping action toward either flank may be required. A formation with two rifle companies in the leading echelon and one in the following echelon is appropriate when the zone of advance is too wide or visibility is too restricted for one rifle company to provide adequate frontal security across the entire zone. A column formation may be employed when the zone of advance is narrow and both flanks are secure; if the battalion has an exposed flank, security is increased by echeloning the rear rifle companies toward that flank. Placing three rifle companies in the leading echelon is avoided; if, because of the width of the zone or limited observation, adequate security cannot be provided by two companies, flank patrols may be furnished by the company in the rear.

b. If contact with hostile ground forces is probable during the march, a machine-gun section (or platoon) and a mortar section may be directed to follow and support each leading rifle company or may be attached. Heavy machine-gun elements on antiaircraft security missions may be distributed throughout the width and depth of the formation. In order to be immediately available, and to compensate for the difficulties of hand carry, the heavy weapons company (less detachments) usually is placed well forward in the formation.

c. Since the rear of the battalion is protected by regimental antitank guns and by those of battalions in rear, the battalion antitank platoon usually moves between the leading and second echelons. Messenger and radio elements of the communication platoon move with the march command post, which is usually with the second echelon. In the absence of an engineer reconnaissance detail, a similar detail from the ammunition and pioneer platoon may move with the leading echelon. The remainder of the battalion headquarters company usually moves with the heavy weapons company (less detachments).

d. Distances between echelons will vary from 200 to 500 yards, depending upon the terrain and conditions of visibility.

118. RECONNAISSANCE. *a.* Reconnaissance must be timely, carefully planned, continuous, and progressive, and so conducted as to take full advantage of concealment and defilade. Study of the ground is supplemented by that of observation reports, maps, and aerial photographs. Friendly troops to the front and on the flanks are valuable sources of information.

b. (1) The battalion commander makes a continuing estimate of the situation so that the battalion is at all times prepared to go into action with minimum delay. He reconnoiters the zone of advance for areas exposed to hostile observation, gassed areas, and obstacles to motor movement; necessary detours; stream crossings; areas where mechanized or air attack are most probable and ways of avoiding or protecting such areas; favorable routes of approach and tentative firing

positions for the battalion supporting weapons; and suitable locations for successive march objectives. He is assisted in his reconnaissance by his staff and by a reconnaissance detail from the heavy weapons company, headed either by the company commander or by the reconnaissance officer. He may also require reconnaissance to be made by the antitank officer, the leader of the ammunition and pioneer platoon, and other subordinates.

(2) When covering forces to the front are sufficiently strong, the battalion commander and his party may precede the battalion in order to obtain early information of the enemy and plan the attack.

c. When leading battalions are not adequately covered to the front, the regimental intelligence and reconnaissance platoon, usually under regimental control, operates motorized patrols three to five miles ahead of the foot elements. Part of the platoon, usually a reconnaissance squad, may be attached to the battalion when the latter comprises the entire leading echelon of the regiment. Instructions of the battalion commander to an attached unit of this platoon may include—

(1) Route or zone of advance and approximate hour the leading echelon of the battalion will reach each phase line.

(2) Areas to be reconnoitered (such as woods, ridge lines, defiles, stream crossings) and the essential information to be sought, especially concerning obstacles, including mines, or other enemy works.

(3) Arrangements for liaison with friendly units operating in front of the battalion.

(4) Times and places for periodic contacts with the battalion command post; any special instructions regarding reports.

(5) Action to be taken when the enemy is first encountered; and when he is located in considerable force.

d. The battalion commander directs the commander(s) of the leading company (or companies) as to reconnaissance to be made by dismounted patrols. He may augment the patrols with the battalion intelligence personnel.

119. SECURITY. *a.* In addition to the security provided by advance motorized elements, the leading echelon provides for frontal security of the battalion. It covers its advance with scouts and/or patrols. (See FM 7-10.)

b. When the battalion is on an exposed flank, a strong flank guard is provided; exceptionally, the regimental commander may assume responsibility for an exposed flank. A small patrol from the leading echelon will usually suffice to protect an interior flank when the interval between the battalion and the adjacent unit is small, the terrain open, and visibility good. Under less favorable conditions, larger patrols or detachments (squads or, rarely, platoons) may be detailed from supports or reserves with the mission of providing security and maintaining contact with adjacent units.

c. For antiaircraft security, see paragraph 73. Air-antitank guards are detailed to cover the front, flanks, and rear of the battalion.

d. As far as is consistent with the tactical situation, the battalion commander directs the movement of the battalion so as to utilize terrain difficult for hostile tank action. The location of such terrain is considered in determining phase lines. (See par. 116.) Connecting groups and security patrols may be reinforced with antitank rifle grenadiers.

e. (1) The battalion antitank platoon is employed to provide frontal and flank antitank protection to the battalion. It is usually directed to march and operate as a unit when the battalion zone of advance is narrow or when only one flank of the battalion is exposed to mechanized attack. Distribution by squads is usually essential when an extensive front must be covered or when tank attacks against both flanks of the battalion are possible. When units of the regimental antitank company are attached to the leading battalion, they are disposed to give depth to antitank defense and to provide additional flank protection.

(2) When the terrain affords long fields of fire and observation to the front and flanks, antitank guns cover the advance of the battalion by moving by bounds to successive terrain features. Unless a mechanized attack is imminent,

each gun on completing a bound remains coupled to its prime mover in a cover position located near a tentative firing position. Ordinarily the antitank weapons are moved by echelon so that at least part of them are always prepared for action. (See also FM 7-35.)

120. CONTROL OF MOTOR VEHICLES. *a.* Upon initiation of the approach march, the regimental commander releases company transport and battalion ammunition vehicles to the leading battalion. The battalion commander releases company transport to units unless the situation or terrain conditions prohibit vehicles from closely following their units; in this event vehicles are moved forward, weapons and an initial supply of ammunition are unloaded and carried by hand, and vehicles revert to battalion control.

b. Since movement by hand of the 57-mm antitank guns is impracticable for extended distances, the vehicles of the battalion antitank platoon accompany the unit even if movement by circuitous covered routes is necessary.

c. Ordinarily, when other unit transport is retained under battalion control, the vehicles of the heavy weapons company headquarters and the headquarters truck of each heavy weapons platoon are released to their units.

d. Whenever practicable, transport retained under battalion control follows the battalion by short bounds. Under unfavorable conditions, movement by long bounds from cover to cover or by circuitous covered routes may be necessary.

121. SIGNAL COMMUNICATION. Communication is maintained by foot and motor messengers, by visual signals, and by radio when not silenced. Wire is not laid until initial command and observation posts for the attack are established; however, existing commercial wire or abandoned enemy wire may be used. In using pyrotechnic signals the possibility of disclosing the presence of troops to the enemy must be considered, as well as the possibility that he may learn and imitate such signals.

122. SUPPORTING ARTILLERY. The battalion of light artillery which normally supports the infantry regiment is

usually placed in direct support of the regiment and given the mission of delivering the supporting fires desired by the leading battalion(s). An artillery liaison officer with his liaison section accompanies the commander of each infantry battalion. Artillery forward observers advance with each rifle company in the leading echelon. (See also par. 99*c*.)

123. CONDUCT OF APPROACH MARCH. *a*. The units of the leading echelon, moving on a broad front, advance aggressively from one phase line to the next or as directed by the battalion commander. By close adherence to the prescribed direction of advance or by regulation on the base company, delays for readjustment are avoided. Minor deviations from the prescribed direction of advance are authorized in order to take advantage of trails or more favorable terrain. Principal roads, important road junctions and crossroads, and prominent landmarks likely to be registered on by hostile artillery, or which may be under hostile observation, are avoided or passed rapidly.

b. Companies in rear of the leading echelon take advantage of concealment and defilade, and where practicable, use trails or secondary roads.

c. The appropriate supporting weapons of the battalion are kept in constant readiness for use in defense against hostile air and mechanized attacks. They are prepared to render prompt support to the leading echelon. When covering forces in advance of the battalion are sufficiently strong, heavy machine-gun and antitank-gun elements will frequently be sent ahead in order to establish antiaircraft security and antimechanized defense for defiles or for the battalion assembly area prior to the arrival of the battalion. When the battalion is to relieve or pass through other infantry units, elements of the heavy weapons company and the antitank platoon may be sent ahead to supplement the covering forces and occupy initial firing positions for the attack prior to the arrival of the rifle companies.

d. Regular halts are omitted. Such halts as are necessary to rest or reorganize the troops are made on phase lines or at the times when periodic reports of progress are made. (See

par. 116.) Higher commanders provide for long halts as indicated by the situation, indicating the probable length when known; and when such a halt is made, a march outpost is established by the leading battalion.

e. The actions of the leading battalion upon encountering the enemy are similar to those prescribed for an advance guard battalion in paragraph 99*e*.

124. DAYLIGHT APPROACH MARCH, REAR BATTALIONS. A battalion in rear of the leading echelon of a regiment seeks maximum concealment, but maintains itself in a state of readiness for action. Except for variations noted below, the principles enunciated in the preceding paragraphs are equally applicable to a battalion not in the leading echelon.

a. Distribution of troops. The heavy weapons company (less machine-gun elements providing antiaircraft security to rear elements of the battalion) may move in the leading echelon in order to establish early protection for the battalion when it halts on phase lines or occupies an assembly area.

b. Route of advance. As in the case of leading battalions, principal roads and prominent landmarks are avoided or passed rapidly. Greater advantage is taken of paths and trails. Movement is directed along the edges of woods and cultivated fields and along the sides of ravines or hills to make concealment and progress easier.

c. Contact. The battalions maintain contact with the leading battalion by means of connecting groups; a liaison officer provided with radio communication may also be used.

d. Motor vehicles. The motor elements of the battalion, less those essential for command, reconnaissance, security, and control, are grouped in either a battalion or a regimental motor serial. The battalion motor transport officer usually controls the battalion vehicles.

e. Command post. The march command post moves with the leading echelon.

125. NIGHT APPROACH MARCH. To avoid observation by the enemy, and to promote secrecy of movement and surprise, the approach march is made by night when practicable. (See FM 7-40.) It must be protected by adequate covering forces. The procedure, except as noted below, is as prescribed for night marches in chapter 6.

a. Reconnaissance. When practicable, the battalion commander conducts a daylight reconnaissance of the route of march and of the battalion assembly area or other final march objective. When practicable, he takes with him company guides who will conduct the companies from their point of release from the battalion column to their respective locations on the final march objective.

b. Orders of battalion commander. The battalion commander's order includes the following:

(1) The latest information relative to the enemy and friendly troops, including the security force.

(2) March objective.

(3) Route.

(4) Initial point.

(5) Time head of leading unit passes initial point.

(6) Formation of the battalion and distribution of troops.

(7) Special measures prescribed for security, secrecy, and control.

(8) Instructions concerning point of release of companies from battalion column, when this can be foreseen.

(9) Instructions as to dispositions and security measures to be taken upon arrival at the final march objective or when and where such instructions will be issued.

(10) Instructions relative to company transport and battalion train.

(11) Instructions for signal communication, including location of march command post or its axis of advance.

c. Distribution of troops. Usually the foot elements of the battalion are marched in column without distance. With the exception of the vehicles needed for command and control

purposes, transport is held in a concealed area and moved forward so as to arrive at the final march objective shortly after the foot elements arrive. The battalion antitank platoon usually moves with the battalion motor serial. It may move as a unit or be distributed in the motor column by squads. (See *e* below.)

d. Control. The success of a night approach march depends in great measure upon the forethought exercised to insure control. Distances between phase lines, when these are used, are closer than by day. These result in shorter successive bounds. Routes are carefully marked. At the final march objective, guides are provided and active supervision exercised by the battalion commander and his staff, in order to insure that units move to their assigned locations without halting.

e. Security. If practicable, contact is gained before dark with the security force covering the march objective and its dispositions made known to all elements of the battalion. The antitank platoon, or elements thereof, may form part of a motorized detachment sent ahead to block possible avenues of tank approach which threaten the foot echelon of the battalion. In some situations a motorized detachment, including antitank guns and heavy weapons, may be sent ahead of the battalion to outpost the assembly area or other battalion march objective. For other security measures in a night march, see chapter 6.

f. Signal communication. Chief reliance for signal communication is placed on foot messengers. Radios normally are silenced. Pyrotechnic or other visual signals, and sound signals when close to the enemy, are prohibited except in an emergency following certain discovery of the movement by the enemy. Some use may be made of motor messengers, particularly between battalion and regimental command posts.

Section III

ASSEMBLY AREAS

126. GENERAL. *a.* When the battalion is an advance guard or the leading unit in an approach march not protected by friendly forces to the front, it may go into action directly from the approach march. When practicable, however, the battalion interrupts its approach march to occupy an assembly area preliminary to deployment for attack. In the assembly area the attack is organized; equipment not essential to combat is discarded; any company vehicles under battalion control are released to company control; and extra ammunition is issued to rifle companies. (See par. 92.) Reconnaissance and plans for the attack are completed and attack orders issued, while the troops are in their assembly areas.

b. (1) When the attack is to be launched approximately at dawn, the battalion may be rested in a rear assembly area and conducted under cover of darkness to a final assembly area. (See par. 125.) Movement to the final assembly area is made at such time as will insure complete and coordinated dispositions for the attack. The utmost precautions must be taken to preserve secrecy.

(2) If the rear assembly area is less than one hour's march from the line of departure, companies usually move directly to their attack positions without halting in a final assembly area.

127. ASSIGNMENT OF BATTALION ASSEMBLY AREA. *a.* The battalion assembly area usually is designated by the regimental commander; exceptionally, it is selected by the battalion commander.

b. Except when a rear assembly area is occupied preparatory to an attack at dawn, the assembly area should be the most forward locality in rear of the line of departure which affords cover from small-arms fire and concealment from hostile air and ground observation. It should be sufficently large to permit dispersing all elements of the battalion. Terrain is desirable which possesses all-round observation on or

near the perimeter of the area, turn-arounds for motor vehicles, and natural protection against mechanized attack.

128. RECONNAISSANCE AND OCCUPATION OF ASSEMBLY AREA. *a.* The regiment may send a quartering party, which includes the battalion quartering party, to the assembly area. (See FM 7-40.) Composition and operation of the battalion quartering party are generally the same as for movement into a bivouac. (See par. 108.)

b. When time permits, the battalion commander precedes his battalion to its assembly area in order to reconnoiter the area and approve the allotments of space made by the quartering officer, or direct the necessary changes. When time prior to the attack is short, the battalion commander will usually be engaged in reconnaissance and preparation of plans for the attack while the assembly area is being reconnoitered; when this is the case, he subsequently informs the quartering officer of his contemplated formation for the attack, and any desired arrangement of units within the assembly area.

c. So far as practicable, units are placed in the assembly area to conform to their prospective employment in order to facilitate their forward movement to attack positions. Due consideration also is given to concealment and dispersion of troops and transport.

d. All elements of the battalion move directly to their designated positions in the assembly area without pausing. Congestion is avoided.

129. SECURITY. *a.* Each battalion commander is responsible for the local security of his battalion, including the establishment of an air-antitank warning system. (See par. 70.) The regimental commander will coordinate the security measures taken by the battalion commanders and have the advance guard or leading battalion establish an outpost to protect the assembly position of the regiment.

b. The occupation of a battalion assembly area is protected by elements of its leading rifle company (or companies). Each

company in the assembly area is responsible for its own local security.

c. The battalion commander should direct that part or all of the heavy machine guns occupy positions to provide antiaircraft security and local security to the assembly area. Positions which afford all-around fire are sought on or near the perimeter of the assembly area. Any heavy machine guns not employed on antiaircraft security missions and the 81-mm mortars may be emplaced to support the action of the covering force, outpost, or local security detachments.

d. The battalion antitank platoon may participate in perimeter defense of the regimental area with the platoons of the other battalions and the antitank company. In such cases, it will ordinarily occupy that portion of the perimeter pertaining to its own battalion. When the battalion is assigned the outpost mission, the antitank platoon is employed as in the bivouac outpost mission. (See par. 110.) When the battalion assembly area is separated from that of the regiment, and the battalion is not assigned the outpost mission, the platoon will usually occupy one or more firing position areas and provide local antimechanized protection for the battalion. Mines may be used. (See FM 7-35.)

e. Instructions for the antitank platoon, for heavy machine guns employed for antiaircraft security, and for local security elements, are issued in time for these elements to move to positions directly from the approach march without halting in the assembly area.

f. During occupation of an assembly area, elements of the cannon company may be attached to, or placed in close support of the covering force; the remainder of the company is usually assigned the mission of supplementing the antimechanized defense of the area. Ordinarily, not more than one cannon platoon is attached to a battalion executing a covering mission. (See FM 7-37.)

g. If the occupation of the assembly area is to continue from daylight into darkness, plans are made in daylight for changes in the positions of weapons or local security detachments

to be effected at dark. If practicable, and desirable for reasons of security, the battalion commander should request authority to move the entire battalion shortly after dark to a new assembly area located at least ½-mile from the area occupied in daylight.

Section IV

TYPES AND METHODS OF ATTACK

130. GENERAL. The battalion ordinarily attacks as part of the regiment. The regimental attack order assigns each battalion in the attacking echelon a mission (usually the capture of a terrain objective which is furnishing the enemy his observation), designates its zone of action or frontage, indicates supporting (or attached) units, prescribes a line of departure, and usually fixes the time of attack. Intermediate terrain objectives may be prescribed. (See FMs 7-40, 100-5.)

131. TYPES OF ATTACK. *a. Meeting engagements.* A meeting engagement is a collision between two opposing forces neither of which is fully prepared for combat. The time element is usually vital and the force which attacks first in a decisive direction will gain tremendous advantage. Battalion commanders are frequently directed to continue the movement of their battalions toward a prescribed area(s) while they report for orders. Commanders of battalions already engaged habitually remain with their battalions and send a staff officer to receive such orders. Following receipt of the order, reconnaissance must be limited to essentials, decisions reached promptly, and orders to subordinates issued by the most expeditious means. The control of supporting weapons is frequently decentralized. At the outset, a meeting engagement is a piecemeal attack, units being given missions and committed to action, as they become available. Speed in launching the attack and rapidity of action are more vital at this stage than thoroughly coordinated and powerful fire support; however, the battalion commander must attain this coordination gradually as the action progresses, developing his fires to

support the hastily-adopted plan of maneuver. For the conduct of an advance guard battalion in a meeting engagement, see chapter 6.

b. Attack against discontinuous resistance. Hostile security elements may occupy positions for discontinuous resistance whose extent, strength, and flanks are not easy to determine. Such discontinuous resistance may be encountered by an advance guard battalion, by leading battalions in an approach march, or by battalions engaged in pursuit. Maneuver by the leading elements, rather than the organization of a powerful attack, is relied upon to reduce such resistance. Infiltration of small groups along covered approaches and the continued advance of elements which encounter no resistance will outflank isolated detachments and usually bring about their withdrawal. Hostile elements continuing to resist are reduced by envelopment or by combined frontal and flanking action.

c. Attack against an organized position. Thorough coordination and the development of great fire power in the initial stages are required when the enemy has prepared and organized his position. Tank support may be used if the situation permits. The delays required for preparing and coordinating the attack of such a position will vary with the degree to which the enemy has been able to organize his defense; against a highly organized position they may be considerable. Preparations must be made as rapidly as is consistent with thoroughness in order to reduce to the minimum the time available to the defender for improving his defenses.

132. METHOD OF ATTACK. *a.* Whether an attack is the result of a meeting engagement, is directed against discontinuous resistance, or is a deliberate attack against an organized position, its conduct is essentially the same. Differences exist mainly in the coordination and speed characterizing the early stages.

b. In daylight, the battalion attacks by combining fire and maneuver to close with the enemy and then by employing shock action completes his destruction or capture. Fire weakens the enemy by inflicting casualties and neutralizes his elements by forcing them to take cover; in the presence of the

enemy, fire must be used to protect all movements not masked by cover, or by fog, smoke, or other conditions of reduced visibility. Through maneuver, the battalion increases its fire effect by decreasing the range and by placing elements in positions on the hostile flank from which they can develop convergent fires; by maneuver, also, the battalion advances its attacking echelon close enough to the hostile position to permit the assault to be made with hand grenades and the bayonet.

c. There are two forms of attack maneuver; the envelopment and the penetration. (See FM 100-5.) Best results are usually obtained by envelopment. However, in the initial stages of an attack against a hostile position, it is seldom possible for the main attack of the battalion to be directed so as to pass the flank of the hostile position and strike its flank and rear, unless the battalion is acting alone or is on an exterior flank of a larger force. An interior battalion must usually make what is essentially a frontal attack; however, it endeavors to combine flanking with frontal action by effecting a penetration. The penetration secures positions from which flanking fire of light machine guns and other flat-trajectory weapons can be placed on the newly-created flanks of hostile elements still resisting, or from which attacks of supports and reserves can be directed against the hostile flank or rear.

d. The cover from fire, and concealment from observation afforded by the terrain will seldom be uniform in all parts of the battalion zone of action, nor will the available supporting fires normally be sufficient to neutralize at one time all the hostile forces opposing the advance of the battalion. The battalion commander's plan, therefore, must provide for a concentration of effort for the purpose of advancing a portion of the attacking echelon toward objectives whose capture will facilitate the advance of the remainder of the battalion. This constitutes the *main attack.* It is usually made through the weakest part of the hostile dispositions, that is, in terrain where the defender cannot use his weapons or obstacles, including mines, to advantage, where covered approaches permit an advance close to his position, or where his defensive

works are exposed to observation and fire by the attacker. The main attack may be made in conjunction with a *secondary* attack in order to force the defender to disperse his efforts so that he cannot use his full defensive strength against one portion of the attacking echelon. In attack orders, however, the battalion commander does not distinguish between nor use the terms "main attack" and "secondary attack."

e. To increase the power of the main attack, the battalion commander concentrates the bulk of his supporting fires on those targets whose destruction or neutralization will most effectively assist its advance. (See FM 7-15.) The power of the main attack may also be increased by assigning to it a narrower zone of action than that assigned to the secondary attack.

f. The secondary attack is designed to hold the enemy in position, to deceive him as to where the main attack is being made, to prevent him from reinforcing the elements opposing the main attack, and to cause him to commit his reserves prematurely and at an indecisive location. Since these purposes can best be accomplished by a vigorous advance, the unit making the secondary attack is assigned an appropriate terrain objective, and required to attack this objective with all the means at its disposal. Exceptionally, it may be given the mission of using its fire power, without maneuver, in support of the main attack, but this is done only when its departure position lies within effective range of its objective, and when its zone of action is so lacking in cover that its initial advance depends upon the capture of a terrain feature by the main attack. When assigned such an initial mission, the secondary attack advances as soon as it is able to maneuver elements in rear of the main attack so as to facilitate its own advance.

Section V

RECONNAISSANCE, PLANS, AND ORDERS FOR AN ATTACK AGAINST AN ORGANIZED POSITION

133. RECONNAISSANCE. Upon receipt of the regimental attack order, the battalion commander conducts reconnaissance, formulates the battalion plan, and prepares to issue his attack order. (See FM 7-40.) He conducts his personal reconnaissance, and directs that of his staff, so as to obtain information of the following:

a. The battalion objective(s), line of departure, and zone of action.

b. Key points and areas occupied or likely to be occupied by the enemy.

c. Areas swept or likely to be swept by hostile flat-trajectory fire and/or which are under enemy observation.

d. Location, extent, and type of natural and artificial obstacles, especially mined or gassed areas.

e. Location, nature, and extent of favorable avenues of approach to the hostile position (areas where the defender's observation and fire and use of tanks and mine fields are restricted by the nature of the terrain).

f. Location of suitable company objectives.

g. Location of any friendly units through which the battalion is to pass and determination of assistance that may be expected from them.

h. Location of suitable position areas and targets for supporting weapons.

i. Determination of the extent to which the battalion flanks will be protected initially by the location of adjacent units and the nature of the intervening terrain.

j. Suitable locations for the reserve, for supply and evacuation facilities, and for the battalion observation and command posts.

k. Location of likely avenues for hostile tank attack.

134. FORMULATION OF PLAN. Based on the information secured by reconnaissance, the battalion commander decides how best to employ the elements of his battalion and attached or supporting units in order to accomplish his mission promptly and with the fewest casualties. He makes any necessary adjustments in his tentative plan of attack. His final plan of attack must insure maximum teamwork between the attacking rifle elements and the supporting weapons. It consists of two main parts, the plan of maneuver and the plan of supporting fires. (See fig. 9 (1).) In addition, it covers the administrative details of supply and evacuation, and the establishment of the signal communication system necessary for control.

135. PLAN OF MANEUVER. The battalion commander's plan of maneuver is his plan for employing his rifle companies to accomplish his mission. It includes determination of company objectives; where and in what direction the main and secondary attacks are to be made; zones of action of the attacking rifle companies; formation of the battalion; composition, location, and employment of reserves; use of tanks, if attached (see par. 142*b*); security measures initially necessary; and the time of attack. Tentative plans for the defense of the objective, when taken, should also be made.

a. Objectives. (1) The regimental attack order directs each leading battalion to capture a terrain objective or a succession of terrain objectives. (See FM 7-40.) The objective assigned to the battalion (or the *initial* objective where more than one is assigned) may be located so far in rear of the hostile main line of resistance that the assignment of portions of this objective as initial objectives for leading rifle companies would result in the attack breaking down into separate, uncoordinated attacks by isolated companies. To prevent this, the battalion commander selects intermediate terrain features and assigns them as successive objectives to his attacking rifle companies.

(2) Suitable successive objectives for the main attack are those terrain features whose capture will make untenable nearby portions of the enemy position or which will facilitate

flanking or enveloping action against them. The first of these successive objectives, which should constitute the initial battalion objective, is usually the first critical terrain feature in rear of that on which the hostile main line of resistance is located.

(3) Suitable successive objectives for the secondary attack are hostile positions which prevent or impede the advance of the main attack, or terrain features on which such hostile positions could be established.

(4) Distances between objectives assigned to attacking companies may vary from as little as a few yards in the jungle to as much as a thousand yards in open terrain. Objectives should—

(a) Be easy to recognize on the ground.

(b) Be visible from the line of departure or previous objective whenever practicable. Suitable objectives for the company making the main attack may, however, lie beyond and be masked by terrain occupied by hostile forward groups. Also an objective may not be visible because of intervening woods used as a covered approach by an attacking company.

(c) Be such that their attainment will promote the accomplishment of the mission of the battalion and facilitate probable future action.

(d) Afford good observation and suitable terrain for fire support of a further advance.

(e) Whenever practicable be within effective range of battalion supporting weapons located on or in rear of the line of departure (or last previous objective).

(5) Pauses made on objectives short of the initial battalion objective are limited to those which are imperative for reorganization. Support weapons are promptly displaced forward, by echelon, to insure continuous fire support.

b. Location of main and secondary attacks. At full strength, an interior battalion can deliver a powerful attack on a frontage varying from 500 to 1,000 yards; it may be necessary to assign a battalion making the secondary attack a somewhat broader frontage. Elements of the battalion sel-

dom extend continuously across this entire zone; parts of the zone may be covered by fire, by small patrols, or by both.

(1) *Main attack.* Prior to the attack, knowledge of the hostile dispositions and strength will usually be incomplete, since the enemy will seldom disclose his exact strength or dispositions until forced to do so. The battalion, therefore, primarily attacks *terrain.* The location of the main attack of the battalion may be prescribed in the regimental order. Otherwise, the battalion commander directs his main attack at the weakest part of the hostile position in his zone. (See par. 132*d.*)

(2) *Secondary attack.* Where the battalion zone is narrow, the unit making the secondary attack may be given all of the battalion zone not allocated to the main attack, in order to permit maneuver of its elements. In a wide zone a gap may be left between the units making the main and secondary attacks; in such a case, the unit making the secondary attack is directed to attack in a zone of action which contains the best remaining cover and concealment.

c. Direction of attack. The battalion commander designates the direction of attack by magnetic azimuth and, when practicable, by successive landmarks. When the main attack and secondary attack initially are convergent (for example, when the main attack is directed to outflank hostile resistance on the initial battalion objective while the secondary attack is made frontally), separate directions of attack should be prescribed for each. Otherwise, only a single direction of attack indicating the general direction of advance of the battalion as a whole is ordinarily prescribed.

d. Zones of action. (1) Each rifle company in the attacking echelon is assigned a zone of action. It is responsible for driving out or destroying all hostile elements within its zone.

(2) The battalion commander ordinarily does not designate boundaries between companies, but defines their zones of action by assigning each company an area or a section of the line of departure from which to start its attack and by establishing the lateral limits of its objective(s). If desired, the width of the zone may be indicated by directing that the company attack on a frontage prescribed in yards. An interior

company may be assigned a zone of action from 200 to 500 yards wide.

(3) Companies habitually remain within the battalion boundaries. However, where entry into an adjacent zone is necessary, the battalion commander or the company commander himself if the battalion commander cannot be reached, coordinates this move with the commander of the adjacent unit. Either attacking company is authorized to move elements in rear of the adjacent company of its own battalion in order to execute a flank attack or place flanking fire on the enemy.

e. Attack positions. The regimental attack order may direct the battalion to attack from a given area or locality; this is particularly applicable to an exterior battalion making an envelopment. Usually, however, the regimental commander prescribes a line of departure. At times a line of departure prescribed by the regimental commander may be difficult to locate on the ground or be so located that it cannot be reached without exposure to hostile observation and fire. Under these circumstances the battalion commander should prescribe a more suitable line of departure or direct each attacking company to launch its attack from a prescribed area; these attack positions must not be in advance of the line of departure prescribed by the regimental commander.

f. Reserves. (1) Initially, a portion of the rifle strength must be held in reserve for exploiting a hostile weakness developed by the attacking echelon, striking the final blow necessary to capture an objective, replacing an exhausted or disorganized part of the attacking echelon, or for repelling counterattacks.

(2) Depending on available information of the enemy situation, the troops available to the commander, the mission, and the phase of the attack, the reserve may vary in size from one platoon to two companies (see *g* below). When the reserve that can be held out initially is considered inadequate, the battalion commander may require that company commanders secure his prior approval before committing their supports.

(3) The reserve is placed initially in a locality where it is afforded protection against hostile observation, flat-trajectory fire, and air or mechanized attack. It should be able to

move rapidly to points of possible employment, particularly to further the main attack. If the battalion is making an envelopment, the reserve usually is disposed toward the outside flank so that it may promptly extend or exploit the envelopment. When the battalion has an exposed flank, the reserve should be disposed so that it can move promptly to meet any hostile threat that may develop. (See *h* below.)

g. Formation. The formation of the battalion is governed by the mission, terrain, known enemy dispositions, troops available, supporting weapons, and formation ordered by higher commanders. Most frequently the battalion commander will place one rifle company in the main attack, one in the secondary attack, and one in battalion reserve. When the situation is obscure, the zone of action is narrow, or when the battalion is assigned a sector or a flank, both the main and secondary attacks may be made by elements of one rifle company; the two rifle companies in reserve may be in column behind the leading company or echeloned toward an exposed flank. Exceptionally, when the battalion is making a secondary attack on a very broad front, with limited objectives requiring a short advance, and with hostile resistance expected along virtually the entire front, three rifle companies may be placed in the attacking echelon and one or two platoons, from one or two different companies, held in reserve.

h. Security. (1) *Flank.* (a) The battalion commander is responsible for the close-in protection of his flanks throughout the attack irrespective of any flank protective measures that may be taken by the regimental commander. Protection of an interior flank is usually provided by the presence of the adjacent unit if that unit is ahead or generally abreast; it is then sufficient to employ a connecting group to maintain contact with the adjacent unit and to report periodically and at any other necessary time, the location of its nearest flank. A flank security patrol should be detailed for an exterior flank, or for an interior flank when the location of the adjacent unit, or the nature of the intervening gap, would permit a hostile counterattack to strike the flank of the battalion without coming under effective fire from the adjacent unit. The size of the security elements depends upon the terrain, dis-

tance to adjacent units, and probable number of messages to be sent back; for an interior flank the size will seldom exceed one rifle squad. (For the method of operation of connecting groups and flank security patrols, see FM 7-10.) All connecting groups and flank security patrols may be furnished by the reserve, or they may be furnished for one flank by the unit making the secondary attack. Preferably they operate directly under the battalion commander; however, the commander of a reserve company may be made responsible for flank security.

(b) Other measures for providing security on an exposed flank may include locating the reserve toward that flank and disposing heavy machine guns so that they can cover that flank in addition to their other missions.

(2) *Antiaircraft.* The battalion commander insures that each company details air-antitank guards. For further antiaircraft security measures, see par. 73.

(3) *Antimechanized.* (a) The battalion commander employs his antitank platoon primarily for the protection of the front and flanks of the attacking echelon of the battalion; for deeper protection on the flanks, and to the rear, the battalion is frequently reinforced by a platoon of the antitank company. The battalion commander usually designates an initial firing position area for the platoon, or for each squad, from which it will protect the attacking echelon by fire in specified directions of likely enemy mechanized attack. These directions are best defined by reference to prominent terrain features visible from the firing position area(s). The attack order will usually designate the location of at least the next position area(s) to which the platoon is to displace and the time at which the displacement is to be effected. The time is usually fixed by prescribing that displacement be made immediately upon the capture by the attacking echelon of certain specified terrain features. The mission(s) to be accomplished in the new location is included. The battalion commander may control the opening of fire, or he may delegate such control to the antitank platoon leader. This is effected by prescribing ranges or designating terrain features which hostile vehicles are to cross or pass before fire is opened. Opening

fires are withheld until the target is positively recognized as a hostile vehicle and is within effective range. For guns, this is ordinarily at a range of 800 yards or less from the gun position. For rocket launcher fire, this is 300 yards or less.

(b) When it is manifestly impossible to foresee the best employment of the platoon after displacement from initial positions, the platoon or elements thereof may be attached to attacking rifle companies or be directed to follow and protect them.

(4) *Command post.* The battalion commander must insure that the command post is provided with adequate local security against attack by hostile patrols, armored vehicles, or airborne troops. For details, see paragraphs 45 and 72.

i. Time of attack. (1) The time of attack is usually prescribed by the regimental commander; depending on the instructions received from him, it may be announced as a definite hour or subordinate elements may be directed to commence the attack on a prescribed signal or at the time a specified tactical action occurs.

(2) When the time of attack must be determined by the battalion commander, he allows time for the issue of extra ammunition and movement of the battalion to its attack positions and also for the necessary reconnaissance, preparation of plans, and issuance of orders by himself and his subordinate leaders when these activities cannot be carried on concurrently with the movement.

(a) The time required to deliver an uncoordinated attack may be computed by taking the total of: (i) the time to move to attack positions by the nearest covered route. (ii) Time length of the column and the time distance of one half the attack frontage of the unit, figured at cross-country marching rates, this being allowed for deployment. (iii) The time for issuance of deployment orders and attack orders.

(b) For a coordinated attack, approximately 30 minutes should be added for the reconnaissances, planning, and orders of subordinate unit commanders. As a guide, one and one-half hours may be taken as a minimum from the beginning of the battalion commander's reconnaissance to the hour named for a coordinated attack.

(3) If the battalion commander prescribes a line (or areas) of departure in rear of the line of departure set by the regimental commander, he must advance the time of attack sufficiently to insure that his leading elements will cross the regimental line of departure at the time prescribed in the regimental order.

136. PLAN OF SUPPORTING FIRES. The plan of supporting fires must be designed to support the plan of maneuver and give maximum assistance to the advance of the main attack. Therefore the major portion of the available fire support is directed initially against the targets most likely to endanger the main attack, whether they are in its zone of action or in adjacent zones. The plan includes determination of the position areas and initial missions or targets for the machine gun, mortar, and antitank fires of the battalion, and of regimental cannon company and antitank company weapons, artillery, tanks, tank destroyers, and chemical units whether attached to or supporting the battalion.

a. Fires of the heavy weapons company. (1) Ordinarily, the battalion commander retains control of heavy machine-gun and 81-mm mortar units and employs them through orders issued to the heavy weapons company commander. The battalion commander plans to employ their fires in coordination with, and to supplement the fires of, the artillery and the regimental and other available supporting units. To effect coordination between the various units under his control the battalion commander designates the position area to be occupied by the heavy weapons company or, if practicable, by each of its platoons. These position areas and the initial targets or fire missions of the company are announced in the battalion order. The 81-mm mortars may be emplaced in battery by platoon, or distributed by section or squad, and may be employed to fire by platoon, section, or squad. Massing of the fire of the entire platoon usually calls for massing of the mortars themselves to facilitate control. When fragmentary orders are issued to a rifle company commander, information of positions and missions of the heavy weapons company which will directly affect the rifle company's operations is

included. Exceptionally, when the nature of the terrain makes control extremely difficult, heavy machine-gun and 81-mm mortar units may be attached to rifle companies of the attacking echelon. (For a description of suitable targets for the heavy machine gun and 81-mm mortar and for the characteristics of suitable position areas for heavy weapons units, see FM 7-15.)

(2) Heavy weapons are emplaced initially as close as practicable to the line of departure in order to avoid forward displacement for as long a time as possible. It is desirable for the heavy weapons to be able to cover, from their initial positions, the advance of the attacking echelon to the initial battalion objective.

b. Fires of the antitank platoon. The antitank platoon is assigned firing position areas to cover the important tank approaches into the front and flanks of the battalion; other antitank fires of the battalion are coordinated with those of the antitank platoon. At times, the platoon may be assigned targets such as hostile antitank guns and other located crew-served weapons, emplacements, pill-boxes, and other point targets. Attached antitank company elements may reinforce and add depth to the antitank defense of the battalion.

c. Artillery fires. (1) An artillery battalion usually is placed in direct support of the infantry regiment. The infantry regimental commander and the artillery battalion commander prepare the general plan of artillery fire support. This includes the general location and duration of any preparatory fires to be put down prior to the time of attack, the priority in which the artillery is to give support to the attacking battalions during the initial stages of the attack, and the emergency pyrotechnic signals to be employed in calling for the placing or lifting of artillery fires.

(2) The supporting artillery sends a liaison detail, including a liaison officer, to each infantry battalion. (See par. 21.) The infantry battalion commander and the artillery liaison officer prepare the detailed plan of close artillery fire support. In accordance with his plan of maneuver the battalion commander indicates to the liaison officer the exact locations on which he desires artillery fire to be placed or for

which he desires the data to be prepared so that fires may be placed upon call. For each location where fire is to be placed, the battalion commander indicates the duration and density of fire desired and the purpose the fire is intended to accomplish. Where appropriate, he also indicates the sequence in which the targets are to be engaged. The liaison officer makes the necessary arrangements for securing the fires requested. An emergency pyrotechnic signal should be prescribed to supplement the normal means of communication employed by the company commander for fires to be placed or lifted.

(3) For a discussion of the operation of forward observers, see paragraphs 21*d* and *e*, and FM 6-135.

d. Cannon company fires. (1) One or more platoons of the cannon company may be placed in support of an attacking rifle battalion; exceptionally, it may be attached. In either case, the platoon leader or his representative remains with the battalion commander, who informs him of targets which he desires the platoon to engage. Owing to the low muzzle velocity and high trajectory of the howitzer, indirect fire is generally used; however, direct fire may be used.

(2) Cannon company weapons are employed primarily to destroy or neutralize hostile troops and weapons which at the time offer the greatest threat to the accomplishment of the battalion mission, and which cannot be engaged as readily by the supporting artillery. Exceptionally, they may engage area-type targets; however, artillery is usually employed against such targets, while cannon company elements are employed principally against point targets. Appropriate targets for cannon company howitzers are automatic weapons, antitank guns, mortars, infantry howitzers, troop concentrations, road blocks, pillboxes, strongly fortified buildings, and armored vehicles. Exceptionally, they may be employed to supplement the antimechanized defense of the battalion; the cannon platoon leader coordinates with the battalion antitank platoon leader in this respect. The cannon platoon may best be employed during an enemy mechanized attack to

destroy or neutralize tanks temporarily halted, or accompanying guns which are supporting advancing tanks. (See FM 7-37.)

e. Tank fires. When tanks are available to the infantry battalion, they may furnish machine-gun, cannon, and mortar supporting fires; they may also reinforce the fires of the field artillery. (See par. 137 and FM 17-36.)

f. Tank destroyer fires. The primary mission of tank destroyer units is the destruction of hostile tanks by direct gun fire. Secondary missions include employment as reinforcing artillery, defense of beaches, destruction of pill boxes and other permanent fortifications, and direct fire support to assaulting troops. Tank destroyers may be attached to or operate in support of infantry units. The battalion commander coordinates their fires with those of his other antitank means. (See FM 18-5.)

g. Chemical fires. Chemical troops are attached for special operations requiring the use of gas, or the extensive use of smoke or high explosive fires beyond the organic means of the battalion. The 4.2-inch chemical mortar platoon, with normal loads, is equipped to place a smoke screen 800 yards long and maintain it under average wind conditions for about 25 minutes. It can also fire powerful concentrations with high explosive shell. Plans for the employment of chemical troops should include a study of the position area(s) assigned, the location and duration of any high explosive fires and of areas to be screened before and at the beginning of the attack, the priority in which the chemical unit is to furnish support to the attacking companies, and the emergency pyrotechnic signals to be used. Smoke may also be furnished by artillery, tanks, cannon company units, the mortars and grenades of the infantry battalion, and sometimes by aviation. On the battlefield, especially when there is little wind, the smoke from high explosive shells, demolitions, bangalore torpedoes, and engineer snakes, frequently produces a substantial smoke screen. In planning to lay smoke, the problems of observation required by commanders and forward observers should be taken into account.

h. Aviation. Aviation normally operates against enemy objectives that are beyond the immediate interest of infantry battalion commanders. However, in a combined air-ground effort (see FM 100-20), friendly aviation may, when conditions demand, be assigned targets close to the infantry front lines or contact zone. Such targets must be readily identified from the air, and controlled by phase lines or bomb safety lines which are set up and rigidly adhered to by both ground and air units. When air power is thus applied in the battalion zone of action, the battalion commander adapts his plans to profit by the air effort. Aviation does not operate in direct support, nor by attachment.

137. TANKS. The inclusion of tanks in an operation affects both the plan of maneuver and the plan of supporting fires.

a. A tank battalion may be attached to an infantry regiment; part of it may in turn be attached to an infantry battalion or be directed to support its attack. When attached, the tank commander becomes a special staff officer, and advises the infantry commander of his tanks' capabilities and makes appropriate tactical recommendations.

b. Part of an infantry battalion may be attached to a tank battalion for local security and groundholding purposes, particularly on distant missions; in such a case, the infantry commander becomes a special staff officer of the tank commander. The attached infantry is moved by trucks when available; however, it may be necessary for them to travel on the tanks. A tank company can carry 75 to 100 infantrymen; six men can ride on the rear deck of a medium tank, and four on a light tank. In rear areas more men can ride, when rope hand holds are provided. (See FM 17-36.) The infantry dismount prior to the launching of the tank attack.

c. The chief limitations on the employment of tanks are unsuitable terrain, i.e., heavy woods and stumps, steep and rocky slopes, deep water courses, and soft ground, especially as these are affected by adverse weather and enemy works. This dictates thorough reconnaissance. (See par. 133.) Even though unsuitable terrain limits the maneuver and shock action of tanks, their cannon and machine-gun fire

power may still be used. Surprise is sometimes gained by using relatively unfavorable, yet passable, terrain. It must be borne in mind that tanks attract enemy observation by their size, the dust they raise, and the noise they make.

d. Tanks assist the attack of infantry by destroying or neutralizing hostile automatic weapons, reserves, counterattacking troops, artillery, communication and supply installations, barbed wire and similar obstacles, and by dominating objectives—that is, tanks that have arrived on an objective in advance of the infantry move to defilade positions and cover the objective by fire, and at the same time protect each other from hostile antitank measures—until the infantry's attacking echelon arrives and is prepared to defend the position.

e. Infantry assists tanks by destroying or neutralizing hostile antitank weapons and tank-hunting teams, locating and removing mines and other tank obstacles, seizing ground from which tanks may attack, locating defiladed routes of advance for tanks, or taking over an objective which the tanks have captured or are dominating. Tanks are capable of capturing and briefly dominating an objective, but not of holding it for a considerable time and organizing it; they should be replaced on the objective by infantry as soon as possible, and always before nightfall, and ordered back to a rallying point for reorganization and servicing.

f. Unity of command should be clearly prescribed in orders; command must be assigned to the leader of the unit charged with the primary mission.

g. For further details, see FMs 7-40 and 17-36.

138. SUPPLY AND EVACUATION. Before deciding on the supply and evacuation details of his plan, the battalion commander considers the recommendations of the battalion S-4 for the location of the battalion ammunition supply point and route of ammunition advance, and the recommendations of the battalion surgeon regarding establishment of the battalion aid station. For further details, see chapters 4 and 5 and FM 7-30.

139. SIGNAL COMMUNICATION. *a.* The initial general location of the command post and the axis of its advance (axis of signal communication) normally are prescribed by the regimental commander. Otherwise, they are determined by the battalion commander. The initial location of the command post should be as far forward as practicable. For details of the establishment and operation of command posts, see paragraphs 40 to 42, inclusive.

b. Communication between the command post and observation post ordinarily is established by voice radio and messenger, and, when practicable, by telephone. The command post of the heavy weapons company is located near the battalion command post. Communication between the battalion command post and the rifle companies is by messenger, radio, and visual signals. Communication between the battalion and regimental command posts is by radio, telephone, telegraph, and messenger (motor or foot). (See also par. 57.)

140. ATTACK ORDERS. *a.* It is essential in offensive situations that subordinates be informed without delay of plans for the employment of their units in order that they may have the maximum time available for reconnaissance and the preparation of their plans. For this purpose warning and fragmentary orders are used freely.

b. For a discussion of battalion field orders, see paragraph 26.

c. The following outline indicates the matter, when appropriate, to be included in the battalion order:

BATTALION ATTACK ORDER

1. *a.* Information of the enemy.
   b. Information of friendly troops.
      (1) Situation and mission(s) of the regiment and adjacent units.
      (2) Suporting fires of artillery, cannon, antitank, tank, and aviation units.
      (3) Security elements in vicinity.
2. Mission(s) and general plan of the battalion.

a Plan of maneuver including objective(s).

b. Formation.

c. Line of departure.

d. Direction of attack.

e. Zone of action.

f. Time of attack.

3. Instructions to subordinate units.

a. Specific instructions to each rifle company in attacking echelon.

(1) Zone of action.
(2) Objective(s).
(3) Security mission(s).

b. Instructions to the heavy weapons company.

(1) Plan of supporting fires.
(2) General position area(s).
(3) Targets or sectors of fire.
(4) Conditions or time for opening fire.
(5) Conditions or time for forward displacement if that can be foreseen.

c. Instructions to the antitank platoon.

(1) Uncoupling area.
(2) Firing position area(s).
(3) Sector of responsibility and principal direction of fire.
(4) Conditions for opening fire.
(5) If guns are to be held mobile, platoon location and mission(s).
(6) Special instructions concerning coordination with other antitank units.

d. Instructions to the reserve.

(1) Initial location.
(2) Contemplated employment, if determined.
(3) Security or other special missions.

x. Instructions applicable to more than one unit of the command.

(1) Alterations or additions to standing operating procedure.

(2) General security measures.
(3) Provisions for secrecy.

4. Administrative instructions and information.
   a. Ammunition supply.
      (1) Initial location of ammunition supply point.
      (2) Route of ammunition advance.
      (3) Alterations or additions to standing operating procedure for ammunition supply.
   b. Instructions relative to company transport and the battalion train.
   c. Initial location of aid station.
5. Communication instructions.
   a. Index to signal operations instructions in effect.
   b. Restrictions, if any, on use of radio.
   c. Special pyrotechnic signals.
   d. Locations and times of opening of battalion and company command posts; alternate locations of battalion command post; location of battalion observation post.
   e. Axis of signal communication.
   f. Location of battalion commander.

Section VI

CONDUCT OF THE ATTACK

141. FLEXIBILITY. *a.* An attack seldom progresses exactly as planned. The battalion commander should carry out his plan vigorously but not adhere to it blindly. He must be alert to exploit favorable developments and overcome unforeseen obstacles. He gives his main attack all the assistance at his command so long as it has a chance of success, but if enemy resistance blocks all its efforts to advance, he must be prepared to shift his main attack to another part of his front where hostile weakness has been discovered.

b. For a schematic representation of a battalion plan of attack and supporting fires, and for subsequent maneuver in the conduct of the attack, see figure 9 ①, ②, ③, ④.

142. LAUNCHING THE ATTACK. *a. With combat team support.* (1) The attack begins when the leading elements of companies in the attacking echelon cross the line of departure. The battalion commander coordinates the forward movement of his units from the assembly area to insure that the leading rifle company elements cross the line of departure at the prescribed hour and that his supporting weapons occupy their initial positions in time to support the rifle elements. He also insures that the movement of the antitank platoon from firing position area(s) which were occupied to protect the battalion assembly area, to firing position area(s) for the attack provides uninterrupted protection for the attacking echelon during its movement to its attack positions.

(2) The heavy weapons commence firing in accordance with the battalion plan of supporting fires. The attacking echelon crosses the line of departure in deployed formation; leading rifle units continue their deployed advance until forced to return the hostile fire. The supporting artillery, cannon company, heavy weapons, and chemical mortars are relied upon initially to gain fire superiority. Rifle fire is opened at ranges greater than 500 yards only when other available fire support is inadequate; it is conserved for use at ranges where riflemen can exert maximum effect.

b. With tank support. In infantry-tank action, there are three initial attack dispositions: infantry-leading, tanks-leading, and infantry-tanks-together. Infantry leads initially when reconnaissance has revealed hostile antitank strength or when the terrain in the direction of desired use is unsuitable for tanks; in this case the tanks support the attack by fire, generally from hull defilade positions. Tanks lead initially, when suitable terrain is available, in launching an attack against a hostile position having little antitank strength in terms of antitank guns, tank destroyers, antitank mines and other obstacles, or when these have been neutralized; in this case, elements of the infantry battalion follow within supporting distance and aid the tanks by fire and maneuver. Often the conditions in these two cases will exist in part only, or it can be foreseen that one case or the other will exist at the very outset of the attack only.

Under such circumstances, it will be well to launch the attack with both infantry and tanks in the leading wave. The infantry-tanks-together disposition promotes flexibility, as the commander can rapidly regroup and redispose elements to meet changes in the combat situation. Unity of command in the composite waves may be effected by attaching a portion of a tank company to each rifle company in the attacking echelon. Conditions which may call for infantry-tanks-together initially in the leading wave include close terrain, limited visibility, woods traversable by tanks, mopping-up operations, and night attacks. (See FM 17-36.)

143. CONDUCTING THE ATTACK. During the attack the battalion commander spends much of his time at successive observation posts or with his subordinate units; he is seldom at his command post. He keeps his executive officer, who normally remains at the command post, informed of his location. He must be able to communicate promptly with his command post, all company commanders, and supporting or attached units. When at an observation post, he usually communicates with the command post by telephone, radio, and messengers. In addition to personal reconnaissance, he keeps himself informed of the situation by personal observation and by information received from his intelligence personnel and from subordinate, higher, and adjacent units. He requires frequent combat reports, including special reports upon the capture of an objective or when a rifle company commits its support, also negative reports, when appropriate. Whenever necessary, the battalion commander details a liaison officer to secure information from an adjacent battalion. Frequent visits to the attacking companies by the battalion commander and members of his staff, particularly during critical periods in their action, promote teamwork, coordination of effort, and confidence. During such visits full information of the situation is exchanged. The battalion commander influences the action by shifting the fires of his heavy weapons and those of any *attached* weapons; by requesting that fires of *supporting* cannon company weapons, artillery, chemical or other units either be shifted or render additional assistance; by arranging for mutual assistance between his attacking companies and for cooperative action between them and adjacent

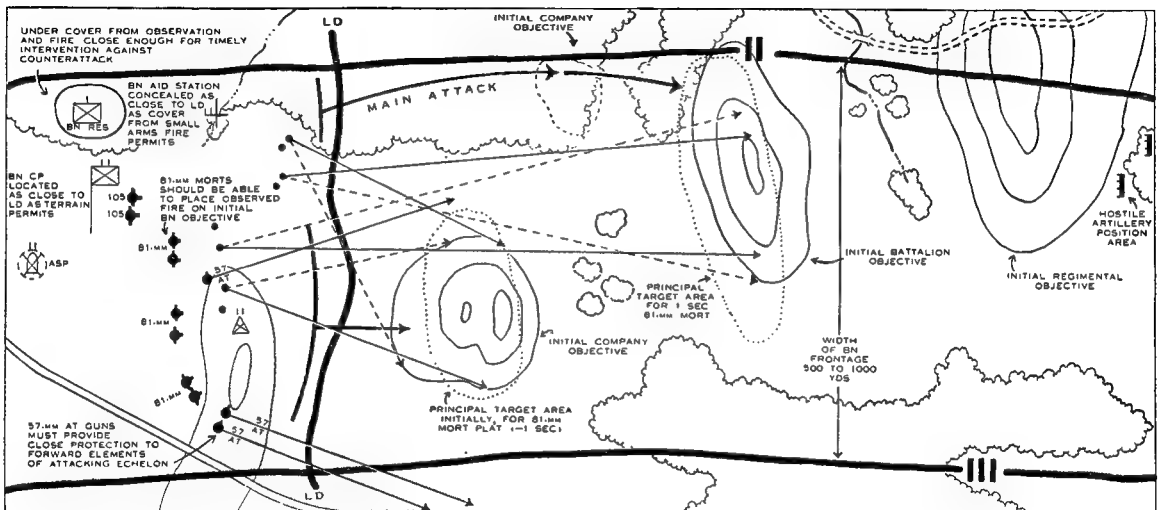

Figure 9 (1). When the attacking echelon crosses the line of departure, the bulk of the supporting fires are concentrated on the initial battalion objective in support of the main attack.

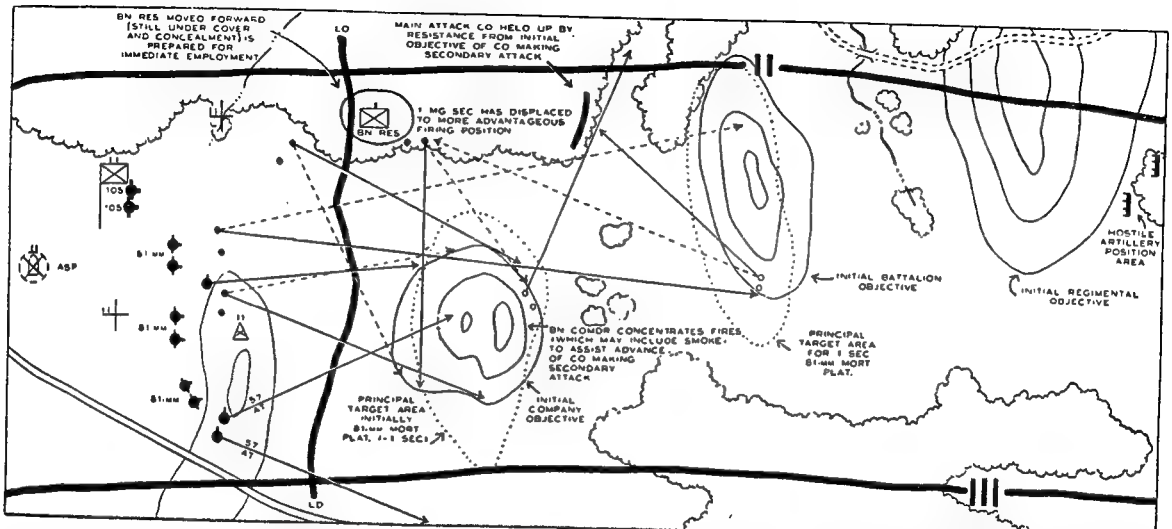

Figure 9 (2). When the main attack is held up by fires from the initial objective of the secondary attack, the battalion commander concentrates his supporting fires to neutralize or assist in reducing the hostile elements which are holding up the main attack.

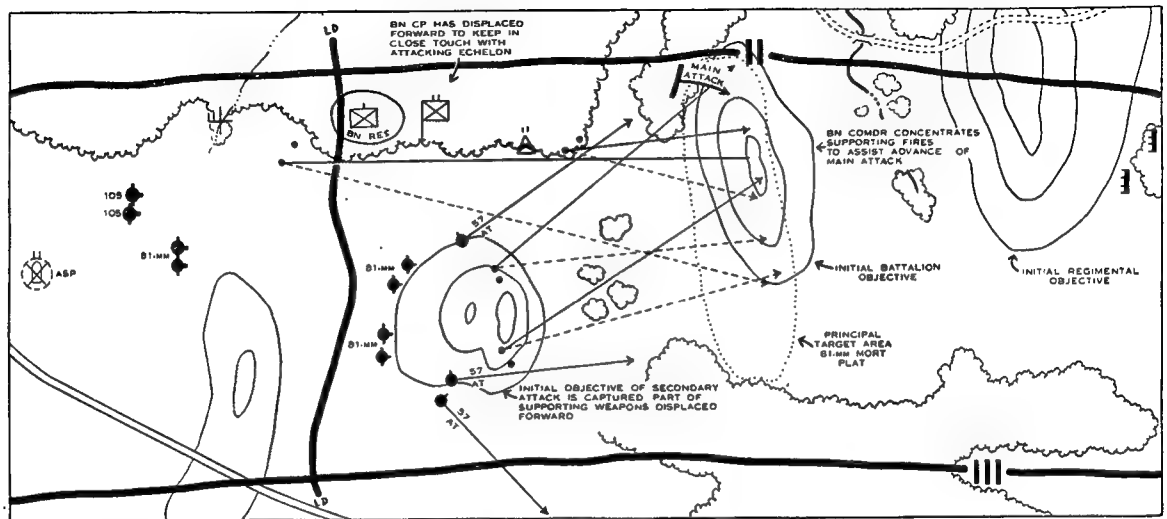

Figure 9 (3). As the attacking echelon advances, displacement of part of the battalion weapons becomes necessary in order that they may continue to give close support and protection to the attacking echelon. Forward displacement of the command post is completed and preparations commenced for early displacement of the aid station and ammunition distributing point.

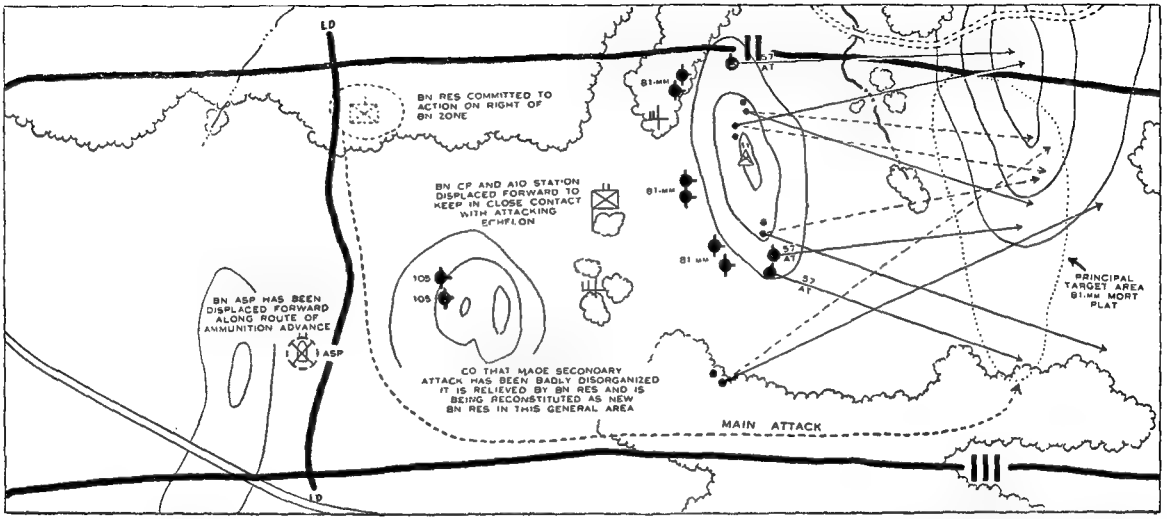

Figure 9 (4). In order to take advantage of more favorable routes of approach and less effective resistance, the main attack may be shifted from one flank to the other. The reserve may be committed to the main attack while a new reserve is organized. Supporting weapons are displaced when necessary to continue close support and protection of the attacking echelon.

battalions; by coordinating the action of his units with that of any supporting tanks or participating combat aviation; and by the employment of his reserve. When enemy pillboxes and bunkers, or mines, booby traps, wire, and other obstacles are located or suspected, the battalion commander employs assault parties and pioneer personnel, adequately supported by fire, for their neutralization.

a. Attacking echelon. (1) The attacking echelon seldom encounters a uniformly held or continuous line of hostile resistance. Inequalities in the resistance encountered and in facilities for advance afforded by the terrain and by supporting fires result in the delay of some attacking units while other units are able to advance.

(2) In furtherance or modification of his plan, the battalion commander may shift supporting fires from the main attack to assist the secondary attack (see fig. 9(1)) or may direct a more advanced company to assist by fire or flanking action an adjacent company that is held up. However, he does not stop or delay the advance of a company which has outdistanced the units on its flanks merely to preserve a general alinement, or in order to adhere rigidly to his plan of attack. He protects an advanced company against counterattack or infiltration of the enemy into its rear by advancing his reserve and supporting weapons sufficiently close behind the exposed company to be able to render prompt support. (See fig. 9 (3).) As the attack progresses, he may shoulder forward, shifting the weight of the attack from one flank to the other in order to take advantage of more favorable routes of approach or to avoid making his main effort frontally against known or suspected hostile strength. This is accomplished by shifting the bulk of his supporting fires and, when the situation warrants as indicated in *c* below, by committing the reserve.

(3) The battalion commander continues to press the advance of his attacking echelon to the final objective even though it outdistances the adjacent battalions. He keeps the regimental commander informed as to his situation; if he loses contact with flank battalions, he reports that fact

promptly. If diverting his reserve or the fire of his supporting weapons to assist a battalion held up on his flank would delay his advance, he does not undertake such action unless directed to do so by the regimental commander. However, he assists adjacent battalions whenever such action will assist the advance of his unit or serve to protect an exposed flank. When he believes that assistance from more advanced battalions would further the regimental plan of attack, he asks that such assistance be furnished; otherwise he secures permission to cross the boundaries in rear of adjacent battalions whenever such action will enable him to employ flanking fires or to execute flank attacks.

b. Employment of supporting weapons. (1) As the attack progresses the battalion commander assigns new position areas and missions to the heavy weapons company and antitank platoon and any attached units or weapons in order to insure continuous close support and protection for his attacking echelon, and to adjust the plan of supporting fires in case he make any changes in his initial plan of maneuver. He may delegate determination of the time and method of displacement to the commanders of these units. Displacement of supporting weapons is ordinarily made by echelon to insure that at least part of the weapons are in position at all times to support the attacking echelon. (See fig. 9.)

(2) During the attack the battalion commander requests such fires of supporting cannon company weapons and artillery as are necessary to give prompt support to his attacking echelon. He coordinates these fires with those of the heavy weapons company. In order to furnish effective support, the supporting artillery and cannon company elements must know at all times the location of the leading elements of the attacking echelon. Although the artillery liaison officer and the cannon company representative are responsible for maintaining liaison and communication with the infantry battalion, the battalion commander must insure that these agents are kept informed of the situation of the attacking echelon and of his contemplated actions.

c. Employment of reserve. (1) Usually the commander of the battalion reserve stays with the battalion commander

or operates from the battalion command post prior to the employment of the reserve. The reserve moves only on orders of the battalion commander, except in emergencies so grave as to justify immediate movement on the initiative of its commander. As the attack progresses it must be kept within supporting distance of the attacking echelon; that is, it must be close enough to intervene before the attacking echelon can be overwhelmed by a hostile counterattack. The battalion commander must therefore issue timely orders for its advance to successive positions. (See fig. 9 (2).) To facilitate prompt movement he directs the reserve commander to reconnoiter and recommend suitable positions and routes thereto; these positions should afford cover and concealment for the reserve in deployed formation. Usually the reserve is advanced initially in rear of the company making the main attack. Later it is advanced in rear of the company making the most rapid advance in order to protect that company against counterattack and infiltration into its rear.

(2) As the attack develops the battalion commander, assisted by his staff, considers tentative plans for possible employment of the reserve, indicates probable employment to the reserve company commander, and directs the latter to reconnoiter in accordance with these plans so that he can act promptly when the decision is made to commit the reserve.

(3) The reserve should be employed to exploit success at points where the enemy is weakening rather than to redeem failure where he is offering stubborn resistance. Resistance holding up the attacking echelon should be enveloped or attacked in flank whenever possible. When the reserve is used to continue the attack of a portion of the attacking echelon which is disorganized, depleted, or exhausted, it should, if practicable, be committed on the flank of the unit being relieved and attack in a new direction rather than pass through the unit being relieved and attempt to continue an unsuccessful attack. (See fig. 9 (1).)

(4) Choosing the proper time for committing the reserve to action is often the battalion commander's most difficult and important decision; it must not be thrown into action piecemeal. The natural desire to retain control of this means

of influencing the action must not be permitted to obscure the importance of maintaining the momentum of the advance. It should be committed without hesitation whenever the attacking echelon can no longer advance or the situation offers an opportunity to expedite the capture of a battalion objective through its employment as a maneuvering unit. The battalion commander prescribes its objective and usually its direction of attack. If possible he prescribes its departure position. He informs other units of the battalion of its contemplated action and shifts supporting fires, as necessary, to assist it. The regimental commander is notified as soon as the decision to commit the battalion reserve has been reached.

d. Use of tanks. In infantry-tank action, when infantry leads, the tanks support the attack initially by fire. If it is impracticable to use them in their primary role of maneuver, shock action, and direct fire tasks, they may be employed to reinforce the fires of the artillery, in which case the latter furnishes them with the requisite firing data. For these reinforcing fires, ammunition requirements must be anticipated, so that the normal loads need not be expended. When tanks lead, that is, when the attacking echelon consists of tanks only, the provision of FM 17-33 apply, and the infantry supports the attack by fire and maneuver. Artillery time fire (air bursts of high explosive shell, fragments of which are harmless to tank armor) frequently showers the tanks as they advance to the objective; when such time fire is used, following infantry is obliged to keep a minimum distance of 300 yards from the tanks. However, when the time fire lifts, the infantry must be ready to advance rapidly to the objective, seize it and prepare to continue the attack. The tanks, having reached the objective, dominate it pending the arrival of the infantry. When infantry and tanks are together in the leading wave, the commander regroups and redisposes them freely as conditions dictate. Some of the infantry may lead in rough terrain, pathfinding for the tanks or reconnoitering for antitank weapons, mines, and tank-hunting teams; the tank component of the leading wave may push ahead to wipe out hostile automatic weapons or bunkers that are holding up the infantry, or to make paths through barbed wire and

other obstacles. They are held together, not by any rigid or static formation, but by identity of mission and unity of command. The commander moves each component in that portion of the zone where it can best accomplish its mission; not necessarily by the same routes, but always keeping tanks and infantry within mutual supporting distances. The presence of antitank mine fields may be first indicated by the loss of one or more tanks. The tank unit should at once be withdrawn to defilade or hull defilade positions, from which it can support the infantry, while the latter proceeds, protected, by necessary fires and smoke screening, to breach the mine field and mark lanes for the passage of the tanks. Engineers, if available, are attached when extensive mine-lifting operations are foreseen. Tanks may participate by pushing into position and discharging demolition snakes. The enemy's defense of his mine fields may, at times when effective smoke screens cannot be maintained, force the attacker to await darkness in order to breach the fields.

144. SECURITY. Security measures planned on the initiation of the attack (see par. 135*h*) are continued in force or modified according to the progress of the attack.

145. ASSAULT. *a.* In the attack, hostile resistance is frequently reduced by a series of local assaults delivered at different times by rifle companies or platoons. (See FM 7-10.)

b. When the entire battalion is held up in front of a hostile position that cannot be outflanked, the battalion commander arranges for a prepared and coordinated assault by his attacking echelon, supported by the regimental cannon company, the artillery, and his heavy weapons. He either fixes a time for lifting of supporting fires and delivery of the assault, or employs a prearranged signal for this purpose. When supporting fires are lifted, the attacking echelon delivers assault fire, and closes with hand grenade and bayonet. Assault fire comprises rifle, automatic rifle, and carbine fires in kneeling or standing positions when the degree of fire superiority makes this possible, coupled with swift advance between shots. Supporting fires lift to targets on the flanks and in rear. (See FM 7-15.)

c. In infantry-tank action, the tanks may assist the assaulting infantry by—

(1) Preceding the infantry to the objective under artillery time fire and dominating it until the time fire is lifted and the infantry moves in, reorganizes, and, depending on the assigned mission, either resumes the attack or prepares the position for defense.

(2) Accompanying the infantry to the objective, eliminating stubborn enemy groups by fire power and shock action, crushing enemy works, weapons, and equipment, dislodging snipers and observers from trees, and, upon reaching the objective, occupying positions of domination and observation. A portion of the infantry must have the duty of giving the tanks local protection against enemy personnel employing magnetic mines, rockets, and antitank grenades.

146. ADVANCE THROUGH HOSTILE POSITION. *a.* Ordinarily the battalion commander can make definite plans and issue orders only to cover the conduct of the attack as far as the initial objective assigned to the battalion. Until this point is reached, companies in the attacking echelon pause only long enough to accomplish any essential reorganization and immediately continue the attack. (See par. 135*a*.)

b. When companies in the attacking echelon have reached the last objective prescribed for them by the initial orders of the battalion commander, he must quickly reorganize his attack and issue additional orders for its continuance. Speed in reconnaissance and issuing of orders is vital in order to permit resumption of the advance in time to take advantage of the initial success.

c. The battalion commander insures timely displacement of battalion supporting weapons to each objective so that they can afford protection from possible hostile counterattack and prepare to support the continuation of the attack. The antitank platoon leader and heavy weapons company reconnaissance personnel must continuously reconnoiter close in rear of the attacking echelon. This insures that information of routes and of new firing position areas may be secured in time to permit rapid displacement.

d. During any pause on an objective the battalion commander insures that his advanced elements maintain contact with the enemy, in order to have early information of the latter's withdrawal or to avert surprise in case of enemy counterattack.

147. SEIZURE OF FINAL OBJECTIVE AND CONSOLIDATION. *a.* When the battalion reaches its final objective, the regimental commander is immediately notified, and will usually prescribe the subsequent action of the battalion. In the absence of orders the battalion commander promptly takes steps to consolidate the position, reorganize, and be prepared either to defend the ground won or continue the attack, as the regimental commander may order. He provides for the security and defense of the position and for maintaining contact with the enemy. He reconstitutes a reserve if necessary. His orders include—

(1) Battalion area in which reorganization is to be accomplished. This will ordinarily be on or near the reverse slope of the objective captured in order to insure defilade from aimed fire of the retiring enemy.

(2) Measures for security particularly against counterattack.

(3) General location of the temporary line of resistance and assignment of responsibility for its defense.

(4) Position areas and missions for the battalion supporting weapons.

(5) Defensive fires of artillery and other supporting units.

(6) Forward movement of ammunition vehicles to permit replenishment of supplies; and other administrative details such as assembling and disposition of stragglers and prisoners of war.

(7) Location of command post.

b. The first step in reorganization is placing small security groups, strong in automatic weapons and rocket launchers, forward of the objective to block counterattack; these groups should be supplemented by hull-defiladed tanks, if available, and by a part of the battalion antitank platoon. One or more

patrols should also be sent out to maintain contact with the enemy and determine the extent of his withdrawal. Minimum reorganization procedure will include a check up on casualties and remaining strength, presence or designation of leaders for all units, similar replacement of specialists, equalization of strength of units, redistribution of available ammunition, and prompt report by each leader to his immediate superior, of the status of his unit. The battalion commander makes a similar report to the regimental commander. The integrity of units is maintained as far as practicable.

c. If, because of hostile interference, it is both impossible to advance and impracticable to take methodical measures for reorganization and consolidation, troops dig in where they find themselves. The battalion commander subsequently fixes the main line of resistance to conform to orders of the regimental commander (see FM 7-40) and to make best use of the terrain held within the battalion zone of action. Readjustments may be made during darkness. The battalion commander coordinates the fire of the heavy weapons company and weapons platoons of rifle companies and arranges for artillery support.

148. PURSUIT. *a. Battalion in direct pressure.* (1) Pursuit beyond the final objective is commenced only upon orders of the regimental commander.

(2) When the battalion is ordered to pursue by direct pressure, it takes up the advance in deployed formation. Its action is similar to that of a leading battalion in the approach march. (See par. 123.) Company commanders are allowed maximum freedom of initiative. The battalion commander's orders, usually brief and fragmentary, give missions, departure positions, directions of advance, and objectives. Objectives usually are much more distant than in the attack. The advance is expedited by all practicable means. Elements of the heavy weapons company are usually attached by section or platoon to leading rifle companies. The battalion can expect to encounter enemy tanks and self-propelled guns which the enemy will employ to cover his retreat. The

pursuing force must be prepared to use all its available antitank means. Tank destroyers and tanks should reinforce the pursuing force whenever available.

(3) When the battalion reserve is intact at the time the final objective is captured, it may be used to begin the pursuit immediately. A new reserve is then constituted. During the pursuit the reserve is committed promptly whenever necessary to prevent the enemy from making a stand.

(4) The battalion commander calls for fires of supporting artillery and of the regimental cannon company, but does not delay his action awaiting such support when delay can be avoided by use of the fires of his heavy weapons company or by maneuver.

(5) Pursuit is pushed to the limit of endurance. No opportunity is given the enemy to reorganize his forces or reconstitute his defense, even at night.

(6) If the pursuit has progressed without serious resistance, the regimental commander may order continuation of the advance during the night. In this case full use is made of roads, trails, and open routes of march. If resistance has been more determined, the regimental commander may order a series of limited objective night attacks. Prompt report is made on arrival at each objective. These night attacks are made in accordance with the general principles of section VIII, but the time for preparation is reduced to a minimum and opportunities for daylight reconnaissance may be lacking.

b. Battalion in encircling force. (1) The battalion may participate in an encircling maneuver as part of a larger force. Ordinarily the battalion will be provided with additional motor vehicles for the transportation of foot elements and will move by motor, detruck in an assembly position, and then attack. If tanks participate, some of the infantry may accompany and attack in conjunction with them.

(2) The battalion as the reserve of a regiment engaged in pursuit by direct pressure may be directed to envelop or encircle hostile forces holding up the regiment. The envelopment may be very wide; it will be characterized by rapid

marching, hasty reconnaissance, prompt issuance of fragmentary orders, and all other possible steps to expedite action.

Section VII

RESERVE BATTALION

149. GENERAL. *a.* For an attack the regimental commander may initially hold one or two battalions in reserve. (See FM 7-40.) He prescribes initial and subsequent locations of a reserve battalion so that it is afforded maximum protection from hostile observation and air and mechanized attack. It is kept within supporting distance of the attacking echelon.

b. Initially and until committed to action a reserve battalion may be assigned missions to—

(1) Protect the flank(s) of the regiment.

(2) Maintain contact with adjacent units.

(3) Protect the rear of the regiment.

(4) Assist attacking battalion(s) by the fire of its heavy weapons.

c. During the attack a reserve battalion may be assigned missions to—

(1) Exploit a success of the attacking echelon.

(2) Exploit any hostile weakness developed by the attacking echelon.

(3) Protect a flank exposed by the advance of the attacking echelon.

(4) Envelop or outflank resistance that is holding up the attacking echelon.

(5) Continue the action of the attacking echelon when it becomes disorganized, depleted, or exhausted (this may require a passage of lines but preferably is executed by movement to a flank of the unit relieved).

(6) Meet hostile counterattacks.

150. MOVEMENT TO INITIAL AND SUBSEQUENT POSITIONS. Upon receipt of the regimental order the battalion commander moves his battalion to the initial position des-

ignated. Extra ammunition is issued and individual rolls are stacked and concealed in an accessible location in the initial position, if these actions have not previously been accomplished. Except in grave emergency the reserve is moved only on order of the regimental commander. Before the battalion falls behind the attacking battalions to the extent that it is beyond effective supporting distance, the battalion commander makes timely recommendations to the regimental commander for movement to a new position. Movement to and occupation of initial and subsequent positions in reserve is conducted as for an approach march and occupation of assembly areas. (See secs. II and III.)

151. ACTIONS WHILE IN RESERVE. *a.* In accordance with assigned missions the commander of a reserve battalion details the necessary patrols and connecting groups to protect the flanks and rear of the regiment and to maintain contact with adjacent units. He will usually detail these elements from one company of the battalion, preferably the company he contemplates placing initially in reserve in case the battalion should be committed to action. Patrols and connecting groups operate as prescribed in FM 7-10.

b. As directed by the regimental commander the commander of a reserve battalion makes the necessary reconnaissance and prepares tentative plans for all possible missions for his battalion. To keep abreast of the situation and the regimental commander's plans, he or a member of his staff remains with the regimental commander or at the regimental command post. Assisted by his staff the battalion commander reconnoiters probable areas of employment for the battalion and routes thereto in order that he may commit his battalion to action promptly when ordered to do so. His reconnaissance and plans and his attack orders when the battalion is directed to attack conform to those described in section V for a battalion in the attacking echelon.

c. The regimental commander may temporarily detach all or part of the heavy weapons company of a reserve battalion for use on special missions, such as to support the leading battalions of the regiment in the initial stages of an attack. Such detached elements are usually returned to the battalion

when their fires from initial positions are masked or their special missions are completed. In any event they are returned before the battalion is committed to action.

152. CONDUCT OF ATTACK. When it is committed to action, the reserve battalion conducts the attack as described in section VI. When assigned the mission of attacking a hostile force making a counterattack, the battalion commander makes every effort to strike the hostile counterattack in the flank before it can disrupt the action of the attacking echelon.

153. RESERVE FOR LARGER UNITS. A battalion may be placed in division or corps reserve. Its missions and employment then will be prescribed by the commander of the unit concerned and are generally similar to those for the battalion in regimental reserve. (See FM 100-5.) The battalion may be motorized by the higher commander.

154. RELIEF TO CONTINUE THE ATTACK. *a.* A reserve battalion may be employed to relieve a battalion engaged with the enemy in order to restore the momentum of the attack. When the relief is executed at night, the battalion relieved is withdrawn to its designated assembly position as soon as units of the relieving battalion are in position; however, it may be ordered to leave heavy weapons in position to support the attack initially until fires are masked. When the relief is made in daylight, the battalion relieved or passed through remains in position and continues fire support of the relieving battalion until its fires are masked and until the new attack has progressed far enough for the battalion relieved to be assembled and reorganized without undue casualties.

b. The approach march and attack of the relieving battalion are conducted as described in sections II to VI, inclusive. When it passes through the battalion relieved, the line of departure will be the line held by the leading elements of the battalion relieved or a covered position just in rear of that line.

c. Because a hostile air or artillery bombardment, while the relief is in progress, may result in heavy casualties, the ut-

most precautions are taken to preserve secrecy and to keep both battalions properly dispersed.

d. When time permits formal relief of one battalion by the other, as in a relief prior to a resumption of the attack at dawn, the battalion commanders of both the relieving battalion and the battalion to be relieved issue warning orders including approximate hour the movement for the relief is to begin, zone in which relieving battalion is to operate, and instructions for reconnaissance to include restrictions on size of parties, routes, and hours of operation. The commander and staff of the relieving battalion and those of the battalion to be relieved meet, if practicable, to arrange and agree upon the details of the relief. Detailed planning depends upon the time available. It may include—

(1) Guides to be furnished by the relieved battalion.

(2) Use of roads and other routes .

(3) Fire support to be furnished by the relieved battalion and time and/or conditions for the withdrawal of its heavy weapons.

(4) Security measures that will be provided by the relieved battalion for the incoming battalion.

(5) Arrangements for taking over existing communication facilities.

(6) Time command passes to the relieving battalion.

Section VIII

NIGHT ATTACK

155. GENERAL. *a.* For the general characteristics of night operations, see FM 100-5. For details of the rifle company and heavy weapons company in night attacks, see FMs 7-10 and 7-15.

b. A battalion may be ordered to make a night attack to acomplish one or more of the following purposes:

(1) Complete or exploit a success.

(2) Gain important terrain for future operations.

(3) Avoid heavy losses which would be incurred by attacks in daylight over open terrain.

(4) Deceive the enemy and cause him to hold forces in position or attract his reserves.

c. A night attack requires careful planning and preparation, special measures to preserve secrecy and secure surprise, and precision and cohesion in execution. A battalion should have a minimum of 3 hours for daylight preparation. If such time is not available the principles given hereafter are applied so far as practicable. Night attacks are seldom justified without ample time for daylight preparation.

d. The attacking force employs stealth to close with the enemy before defensive fixed fires from heavy weapons can be brought down. Attacking troops use bayonets and knives until discovered. They may then employ hand grenades. When practicable, small arms fire is delivered against enemy weapons which reveal themselves by their flash. An aggressive assault, accompanied by shouts and yells, may demoralize the enemy.

e. A night attack cannot be expected to progress through the depth of the hostile position because adjacent and rearward garrisons will be aroused and surprise lost when the assault is made. Therefore, the objective should be a specific area or terrain feature close to the hostile front, and of such width and depth that it can be captured in a single assault by the force detailed to make the night attack. It should be well defined and easily recognizable at night. The approaches to it should permit silent movement. Daylight observation of the objective and of the terrain leading to it is essential. The attack is facilitated if roads, fences, hedges, pole lines, engineer tape or other directional aids are used.

f. The regimental commander, in ordering that a night attack be made, prescribes the objective, the support available from units outside the battalion, and the mission to be accomplished after capture of the objective. Usually his instructions also include a directive that the plan of attack be submitted for his approval.

156. RECONNAISSANCE AND OTHER PREPARATORY ACTIONS. *a.* The preparations to be made by a battalion commander include—

(1) Prompt determination of the rifle strength to be employed in the attacking echelon, and tentative time of attack (if not prescribed by the regimental commander).

(2) Selection of rear assembly area(s) and arrangement for occupation thereof if participating units are improperly located for the attack.

(3) Prompt warning orders stating the nature of the operation, the time for submission of recommendations by heavy weapons company and antitank platoon commanders, as well as those of attached and other supporting units, and the time and place for subordinates to report for orders.

(4) Determination by reconnaissance of the limits of the objective, the most suitable terrain over which to approach it, and the area from which the attack is to be made.

(5) When the attack is to be made by the entire battalion, determination of the formation of the attacking echelon and selection of forward assembly area(s), line of departure, exact lateral limits of each company's objective, limit of advance, and line or points for deployment of the attacking echelon. (See par. 157*e*.)

(6) Issuance of a fragmentary attack order and of instructions for night patrolling in time to permit subordinate leaders to make their reconnaissance before dark. When one rifle company is to make the attack, the order should be issued at least 2 hours before dark. It should include the objective, approximate time of attack, location of the rear assembly area, the forward assembly area, and the mission of the company after capture of the objective. Other details may be included. The recommendations of the company commander concerning the location of protective fires and other desired assistance may be called for.

(7) If the battalion is to move from the rear assembly area to the forward assembly area(s) under battalion control, reconnaissance and marking of the route(s) to be used.

(8) If necessary, issuance of instructions or completion

of arrangements for coordination with any friendly troops occuping the selected forward assembly area(s) and for the creation of gaps in the front lines for passage of the attacking echelon and of other elements displacing to the objective.

(9) Completion of the plan of protective fires, of the plan for employment of the antitank platoon, and of other details of the attack.

(10) Issuance to subordinates of the final details of the attack order.

b. Daylight reconnaissance by the battalion commander and by all subordinate leaders including the leaders of patrols is essential. It is supplemented by additional reconnaissance during dusk and by the study of the most recent vertical and oblique aerial photographs. The battalion commander should secure sufficient aerial photographs of the area to permit distribution of at least one set to each company and to the antitank platoon. The battalion commander requires reconnaissance to be conducted with due regard to secrecy.

c. During daylight, reconnaissance of terrain not held by friendly troops is usually limited to observation from points in rear of our front lines. Frequently the only means of securing detailed information of the terrain in the zone of action, as well as of the location and strength of hostile outguards and listening posts, is by night patrolling. These patrols may also be required to select and mark routes forward of the line of departure and to furnish guides for subordinate units. Every effort is made to locate enemy mine fields and to breach these and other obstacles. The battalion commander's instructions to rifle company commanders define the area each company is to patrol and the information required; the number of patrols, their size, and other details may also be prescribed.

157. PLAN OF ATTACK. *a. General.* (1) Maintenance of direction, of contact and communication between units, and of control over subordinate elements is difficult at night. These difficulties vary directly with the degree of visibility existing at the time of the attack and the methods used must be chosen accordingly. No set method can be followed.

(2) The added difficulties involved in any attempt to change direction at night and the possibility of mistakes in identity, should friendly forces converge, prohibit any maneuver other than a simple attack at close quarters in one direction.

b. Objective and strength of attacking echelon. The objective is usually assigned by higher authority, but the battalion commander determines its exact lateral limits; when the attack is to be made by the entire battalion, he assigns specific portions to each leading rifle company. The use of successive objectives is impracticable. Since the riflemen of one company, when deployed at 2-yard intervals, cover a front of approximately 225 yards, each company objective ordinarily should have a maximum width which does not materially exceed this frontage. However, this limit may be increased if conditions of visibility permit the maintenance of control and cohesion. A minimum width of 100 yards may be assigned to a rifle company. The width of the objective, therefore, will usually determine the strength of the attacking echelon prescribed by the regimental or battalion commander. (See par. 155*f*.)

c. Time of attack. When the attack is to be continued at daylight, a night attack usually is made late in the night in order to permit the enemy a mimimum time to organize an effective counterattack under cover of darkness. The attack should begin in time to complete the capture of the objective at least ½-hour before dawn in order to allow time for reorganization of the attacking troops, as well as for other preparations to meet counterattacks under cover of darkness. In determining when to begin the advance, the possibility of unforeseen delays, such as those involved in silencing hostile patrols and outguards or waiting for hostile illumination to die down, are taken into account. When the mission is to capture, consolidate, and defend an objective, the battalion (or rifle company) usually attacks as soon after dark as it can be made ready and information of hostile night dispositions can be obtained. No set rule can be followed; in order to obtain surprise, an attack may be made shortly after dark even though the battalion (or rifle com-

pany) is to continue the attack the following morning.

d. Battalion (or company) rear assembly area. Troops should be rested and fed, extra ammunition issued, plans completed, and final orders issued prior to the movement of the attacking force to the vicinity of the line of departure. Whenever practicable, these actions are accomplished in a rear assembly area concealed from hostile air and ground observation and defiladed from small-arms fire.

e. Formation. (1) For formation of the rifle company in a night attack, see FM 7-10.

(2) When the attack is to be made by the entire battalion, the battalion commander prescribes the formations (dispositions) of the battalion as a whole and those of the leading rifle companies. Leading rifle companies usually cross the line of departure in line of platoon columns. However, if visibility permits control to be maintained, line of squad columns may be used initially. Intervals between columns are such that a skirmish line may be formed with approximately 2-yard intervals between men without overlapping of platoons. Weapons platoons of these companies, less transport, either follow rifle elements at a distance greater than the limit of visibility or advance by bounds in rear of rifle elements upon orders of the respective company commanders. If the distance to the objective is not excessive they may be left in the forward assembly area to displace forward rapidly upon capture of the objective. The width of the company objective usually requires all rifle strength for the assault; hence leading rifle companies ordinarily do not hold out a support unit. When supports are held out, they ordinarily move with weapons platoons and are employed after the objective has been taken. Officers and men who are armed with the carbine and participate in the night attack may be furnished rifles and bayonets.

(3) The battalion commander constitutes a reserve, usually at least one rifle company, for the primary purpose of providing a force with which to protect the flanks of the captured position against hostile counterattacks launched at or shortly after daylight. Unless the distance from the line of departure to the objective is over 1,000 yards, the reserve is

usually held in rear of the line of departure until after the objective has been captured. By daylight the reserve must be under cover within supporting distance of troops on the captured objective. At that time elements of the reserve may be employed to mop up any enemy groups left in rear of the attacking echelon.

(4) The attacking echelon usually retains its initial formation until it forms skirmish line for the assault. However, an initial formation of line of platoon columns may be changed to squad columns for crossing a level or evenly sloping intermediate area which might be subject to hostile grazing machine-gun fire; line of squad columns then is retained until skirmish line is formed prior to the assault.

(5) The battalion commander may direct that columns deploy as skirmishers for the assault upon arrival at a previously designated line (or series of terrain features) or that the assault be assumed upon his order transmitted as indicated in *r* below. Ordinarily, deployment as skirmishers should be effected when the attacking echelon is from 100 to 200 yards from the objective. Battalion orders must provide for immediate deployment on the initiative of company commanders following discovery by the enemy.

f. Line of departure. The line of departure must be under control of friendly troops, easily and unmistakably identified at night, and approximately perpendicular to the direction of advance. If no terrain feature can be found which fulfills these requirements, the line may be indicated by tape. The ideal situation is found when the line of departure forms the forward edge of the forward assembly area(s).

g. Forward assembly area. If practicable, a forward assembly area is selected which can contain the attacking echelon in the exact formation to be employed for the advance across the line of departure. In this area control measures and directions are verified and security groups moved into position. The selected area should contain a minimum of obstacles and be situated on the axis of advance close to the line of departure. Defilade from flat-trajectory fire is desirable, but not essential, since darkness provides protec-

tion. When necessary, a release point and separate company forward assembly areas are prescribed.

h. Limit of advance. In order to retain control and cohesion and to prevent the attacking echelon from being endangered by friendly protective fires, the battalion commander establishes a limit of advance both in depth and to the flanks of the objective. To be effective this limit must be defined by relation to terrain features which can be identified at night.

i. Reorganization. The battalion order prescribes that the attacking echelon (or the rifle company making the night attack) reorganize immediately upon capture of the objective. This reorganization is in the hands of each company commander and his subordinate leaders. The battalion commander, however, requires that he be notified immediately of the capture of the objective in order that fires may be brought down to protect the reorganizing units. (See FM 7-40.) To insure prompt notification, the commander of each leading rifle company uses a prearranged pyrotechnic signal or communicates the information by radiotelephone.

j. Action after objective is captured. The missions to be accomplished by each subordinate unit and, as far as possible, the dispositions it is to assume upon capture of the objective, must be prescribed in the attack order of the battalion commander. Otherwise confusion, uncertainty, and loss of valuable time will result.

k. Employment of supporting weapons. (1) Prearranged protective fires are planned by the battalion commander to protect the attacking echelon. The plan provides for their release, upon call, after the attack has been discovered or the objective captured. They include—

(a) Fires to box in the objective.

(b) Any additional fires needed to cover probable areas of departure or routes of approach for hostile counterattack against the captured objective.

(c) Mortar flares for observation after the objective is taken.

(2) When the battalion supporting weapons are to participate in prearranged protective fires, the fires of heavy

machine guns, 81-mm mortars, cannon company weapons, and artillery are fully coordinated so as to provide a complete system of protective fires. Antitank guns are located initially to cover roads or other likely avenues of approach for hostile armored reconnaissance vehicles. Positions for supporting heavy weapons, antitank guns, and cannon company weapons must be reconnoitered and marked, and firing data prepared during daylight. Weapons are emplaced under cover of darkness.

(3) Since secrecy is indispensable to the success of a night attack, an artillery preparation is usually undesirable. However, for an attack against a strong position the battalion commander may arrange for a short, violent artillery preparation to be placed on the objective *immediately preceding the assault* and to be lifted on a time schedule, or prearranged signal.

(4) All or part of the heavy weapons company is displaced to the captured objective in time to be in firing positions by daybreak in order to assist in repelling counterattacks. When only a portion of the company is to displace, its firing positions are chosen with a view to facilitating prompt displacement. All or part of the antitank platoon is similarly displaced.

(5) When the attack is to be made by the entire battalion, sufficient supporting weapons from units outside the battalion may be made available to furnish all the necessary protective fires. In this event the battalion commander has his own heavy weapons company follow the attacking echelon by bounds in time to occupy positions on the objective by daybreak.

(6) For details of employment of the heavy weapons company, see FM 7-15.

l. Other arms. (1) When tanks are used, attack positions should be close to objectives, daylight reconnaissance and rehearsal should be most painstaking, infantry should closely accompany the tanks, and the operation should be planned for a bright moonlight night.

(2) Engineers may be attached to remove or demolish

mines and other obstacles, repair routes of communication, and assist in the defensive organization of the objective after capture.

(3) Chemical troops, if attached, deliver planned fires after the attack has been discovered, and are employed after the capture of the objective to assist in its defense or in the continuation of the attack.

(4) Aviation may, by prearrangement, furnish photographs, particularly obliques and vectographs, of great value in planning the action of the battalion.

m. Employment of ammunition and pioneer platoon. Elements of the ammunition and pioneer platoon are frequently attached to the heavy weapons company and to the antitank platoon in order to assist in hand-carrying of ammunition to the captured objective. (See FM 7-15.) When no engineers are available, elements of the platoon may be employed, if necessary, to accomplish the tasks mentioned in *l*(2) above.

n. Control measures. When the attack is made by the entire battalion, control will be facilitated by the designation of a base unit, by directing that column formations be maintained as long as practicable, and by the use of connecting groups when required by conditions of visibility. Roads, fences, streams, and similar terrain features leading toward the objective may be used as boundaries between subordinate units as well as for directional guides. A magnetic azimuth and a rate of advance should be prescribed (see *r* below). Each column commander should be required to march at the head of his column and either an officer or a noncommismisioned officer to march at the tail.

o. Identification measures. Prescribed means of identification are usually both visual and audible. The former may consist of any available distinctive object, such as a handkerchief, underclothing, white brassards, or luminous disks which can be seen at close range during darkness. Words or noises, such as a challenge, password, and reply, given in a low tone, are valuable audible means. (See par. 104.)

p. Secrecy. Measures to secure secrecy are rigidly enforced.

Bayonets are required to be fixed before leaving the forward assembly area and weapons are carried unloaded, or loaded and locked (a command decision), until after the capture of the objective. Lights of every kind are prohibited. Articles of equipment or clothing which make a noise or are capable of reflecting light are securely wrapped, replaced, or eliminated. (Luminous dial compasses and watches are, however, expressly authorized.) Talking is forbidden; orders and reports are given in murmurs. Vehicles are left, under cover, sufficiently in rear of the forward assembly area to prevent their noise reaching the enemy.

q. Security. Security during the advance is provided by means of patrols. When the attack is to be made by the entire battalion, elements of the battalion reserve are located so that they can protect the flanks of the attacking units. A small patrol precedes each advancing column at the limit of visibility in order that hostile elements encountered by the patrol may not also discover the column. Flank patrols operate at distances which do not materially exceed the limit of visibility from the element to be protected. If practicable, patrols include men who speak the enemy language in order that if the patrol is challenged, they may answer while other members of the patrol close with bayonets. A careful mopping up of the objective is essential to its security.

r. Method and rate of advance. (1) The method and rate of advance of the attacking echelon of the battalion are prescribed so as to cause a simultaneous assault by the leading companies. The advance may be made as a continuous forward movement when the visibility is such as to permit control and contact to be maintained. Ordinarily, however, the advance is by bounds, with periodic halts for the purpose of checking on contact and on direction. The battalion commander may prescribe that such halts be made on arrival at designated well-defined terrain features, at prescribed time intervals, or after advancing a prescribed number of paces. He directs that columns, at each halt, verify or reestablish contact and alinement with adjacent columns in the direction of the base unit. He prescribes that the advance will be resumed only on his order, which may be transmitted from

the base unit by messengers or passed from column to column.

(2) Forward of the line of departure the care necessary to preserve silence usually limits the rate of advance to approximately 100 yards in from 6 to 10 minutes, depending upon the degree of visibility and on the nature of the terrain being traversed. In an attack made shortly before daylight the rate of advance is considered in determining the time of attack.

s. Signal communication, battalion in night attack. (1) The battalion command post usually remains in rear of the friendly front lines until the objective is captured. The battalion commander, designated staff officers, and messengers usually follow the base unit of the attacking echelon closely.

(2) The battalion commander and the commanders of leading rifle companies are provided with voice radios. However, their use is prohibited until the enemy discovers the attack.

(3) To facilitate communication between the battalion commander and his comand post a telephone line may be advanced at such distance in rear of the attacking echelon as to prevent the noise of wire-laying reaching the enemy. Foot messengers may also be employed.

(4) Pyrotechnic signals, supplemented in emergencies by voice radio, are used to call for prearranged protective fires. Care is taken to select distinctive pyrotechnic signals or combinations thereof since the enemy may also employ various flares and rockets. The battalion commander retains these signals under his personal control or under the control of the leading rifle company commanders in order to prevent their premature or unauthorized use.

(5) Telephone communication to the objective should be established promptly after its capture.

158. ORDERS. *a.* The order for a night attack goes into much greater detail than a similar order for an attack by day. Provision is made for every eventuality that can reasonably be foreseen.

b. The outline below indicates the matter to be included in the attack order.

BATTALION NIGHT ATTACK ORDER

1. *a.* Information of the enemy.
   b. Information of friendly troops.
      (1) Situation and mission(s) of the regiment and adjacent units.
      (2) Supporting fires of artillery, cannon, antitank, tank and aviation units.
      (3) Security elements in vicinity.
2. Mission and general plan of the battalion.
   a. Plan of maneuver including objective.
   b. Formation.
   c. Line of departure.
   d. Direction of attack.
   e. Boundaries of battalion zone of action and, when practicable, a boundary between companies.
   f. Time of attack.
3. Instruction to subordinate units.
   a. Specific instructions to each rifle company in attacking echelon.
      (1) Objective.
      (2) Formation.
      (3) Forward assembly area.
      (4) Limit of advance.
      (5) Reorganization on objective.
      (6) Company mission upon capture of the objective and mission at daylight.
      (7) Security measures applicable to individual companies.
   b. Instructions to the heavy weapons company.
      (1) Plan of protective fires (if required).
         (a) Position areas.
         (b) Targets.
      (2) If all protective fires are to be furnished by other units, initial location and formation of the company.
      (3) Displacement to objective after its capture.
         (a) Designation of elements.

(b) Time.
(c) Method.
(d) New position area(s).
(e) Target(s) or sector(s) of fire after daylight.

(4) Target(s) or sector(s) of fire after daylight for elements not displacing.

c. Instructions to the antitank platoon.

(1) Initial firing position area(s) and principal direction(s) of fire, or location of position(s) in readiness.

(2) Displacement to objective after its capture.
(a) Designation of elements.
(b) Time.
(c) Method.
(d) New position area(s).
(e) Principal direction(s) of fire.

(3) Changes, if any, to be made prior to daylight by elements not displacing to the objective.

d. Instructions, if any, to the ammunition and pioneer platoon, including attachments of elements to the heavy weapons company or antitank platoon.

e. Instructions for the reserve.

(1) Initial location.
(2) Missions or movements prior to capture of objective.
(3) Mission or movements after capture of objective.

x. Instructions applicable to more than one unit of the command.

(1) Special measures for control and coordination.
(2) Means of identification.
(3) Measures to maintain secrecy.
(4) Security measures before and during the attack and after reaching the objective, especially against counterattack.
(5) Method of advance.

(6) Rate of advance.
(7) Action when hostile security elements are encountered.
(8) When to form in line of squad columns, if that formation is to be used.
(9) When to deploy as skirmishers.
(10) When to load rifles.
(11) Rallying points, in case withdrawal becomes necessary.

4. Administrative instructions and information.
   a. Ammunition supply.
      (1) Location of battalion ammunition supply point.
      (2) Route of ammunition advance after daylight (where applicable).
      (3) Amount of ammunition to be carried.
      (4) Alterations or additions to standing operating procedure for ammunition supply.
   b. Arrangements, if any, for feeding.
   c. Use or disposition of weapon carriers.
   d. Instructions concerning tools, wire, antitank mines, or other special equipment when captured position is to be organized for defense.
   e. Location of battalion aid station(s).
5. Communication instructions.
   a. Index to signal operations instructions in effect.
   b. Pyrotechnic signals.
   c. Restrictions, if any, on use of radio.
   d. Location of battalion command post prior to and during attack and after capture of objective.
   e. Any special instructions concerning signal communication to be established at objective.
   f. Location of battalion commander.

159. CONDUCT OF BATTALION IN NIGHT ATTACK. *a. Advance.* Prior to the jump-off for the attack the battalion commander insures that troops and leaders are in the prescribed formation and security patrols are posted. During the advance he constantly verifies that direction, contact, and cohesion are maintained. The advance is made stealthily

and slowly in order to maintain silence, control, contact, and direction. When hostile listening posts or patrols are encountered, leading security groups promptly dispose of them with the bayonet while nearby columns halt and lie down. When the advance is made by bounds, scouts or patrols reconnoiter for the next advance at the end of each bound. Halts are as short as practicable. If the troops are caught unexpectedly by the illumination of a flare or if the sound of discharge of a flare is detected, all should quickly hit the ground *and remain in place.* Units which lose contact with adjacent units continue to press forward toward their own objectives. The battalion commander avoids the use of prearranged protective fires, if possible until the objective is captured; however, if the attack is discovered, he may call for these.

b. Assault. Precautions must be taken to prevent desultory firing by the enemy from bringing on a premature assault and to avoid a prolonged pause for deployment as skirmishers. Upon deployment the advance is continued at a walk until hostile resistance is met, when the assault is delivered with the bayonet. At this stage, troops press on regardless of flares. Once the assault is launched, the morale of the troops, their individual initiative, and the quality of the leadership by junior officers and noncommissioned officers must be relied upon to decide the issue.

c. Action after capture of objective. Reorganization begins as soon as the objective is captured. Officers and noncommissioned officers organize the men in their immediate vicinity into groups and dispose them to resist hostile counterattacks. Rifle company weapons units move promptly to cover likely avenues of enemy approach. Heavy weapons and antitank guns which have been directed to move to the objective begin to displace forward at once. By daylight all elements should be in position and the battalion reserve should be within supporting distance of the objective. Final adjustments in machine-gun, mortar, and antitank-gun positions are made at dawn.

Section IX

ATTACK IN WOODS

160. GENERAL. *a.* For general characteristics of combat in woods, see FM 100-5. For a discussion of jungle warfare, see FM 72-20. For the regiment in an attack in woods, see FM 7-40.

b. The enemy is forced out of a position in woods by maneuver whenever the terrain permits such action. Situations where this is not practicable are considered here. The battalion commander must reduce a hostile defensive position by an attack through woods which extend generally across his zone of action. The phases of such an action are the attack against the near edge of the woods, the advance through the woods, and the exit from the woods. The near edge of the woods, or a terrain feature in which the edge is included, is named the initial objective; the far edge is often an appropriate objective also.

c. Accurate information of the density of the woods and of roads, trails, streams, natural landmarks, and obstacles within the woods is of particular importance. Much of this information can be obtained from the latest stereo-pair, vectograph and oblique photographs. Requests for such photographs must be made as soon as possible before the need arises. The battalion commander orders intensive ground patrolling to determine the location of hostile units defending the near edge of the woods.

d. When the near edge of the woods is captured, the attacking echelon usually must halt to reorganize. This usually involves a redisposition of smaller units in order to reduce distances and intervals so that cohesion can be maintained during the advance through the woods. Since the edge of the woods is a favorable target for hostile artillery and aviation, the battalion commander must reduce to a minimum the halt for reorganization and necessary redispositions. For this reason he plans the reorganization and advance through the woods at the same time as he plans the initial attack.

161. ATTACK AGAINST NEAR EDGE OF WOODS. *a.* Plans for the advance to and capture of the near edge of

the woods will usually be similar to plans for any other attack.

b. When the attack must be made over ground entirely exposed to the observation and fire of a concealed enemy, it should be made under cover of smoke or darkness. (See sec. VIII.)

162. ADVANCE THROUGH WOODS. Resistance in woods may be encountered from snipers and small patrols operating from the concealment of trees and foliage, or organized defensive positions with obstacles and cleared lanes of fire, or ambushes at defiles within the woods. Much of the firing is at ranges varying from 10 to 100 yards. As an attacker may consider a wooded area a favorable avenue of approach (see par. 133), the defender compensates for lack of observation by sowing the woods with mines and booby traps, or by covering critical areas with prearranged fires. Aggressive reconnaissance is essential to determine the enemy situation.

a. In his initial attack order issued prior to the attack against the near edge of the woods, the battalion commander includes provisions for reorganization and tentative instructions for the advance through the woods. The order includes—

(1) *Assignment of rifle companies to attacking echelon and reserve.* Frequently the width of the battalion zone will require the battalion to attack with two companies abreast. When feasible a formation with one rifle company forward, one rifle company echeloned to the left rear and the other one to the right rear offers the greatest degree of flank security.

(2) *Instructions to attacking echelon concerning formations, frontages, and maintenance of contact and direction.* (a) Within each company of the attacking echelon the formation usually adopted will be small columns with reduced distances and intervals. Patrols and scouts precede the leading elements. Supports follow the leading elements more closely than in attack in terrain affording more visibility. Each leading rifle company is assigned a magnetic azimuth.

(b) The frontage assigned a leading company should not require it to employ a large percentage of its strength in

connecting groups in order to maintain contact between its subordinate units and with adjacent companies. If woods are dense and the battalion frontage cannot adequately be covered by two leading companies, strong flank patrols from the battalion reserve should be employed to cover the intervals between the attacking echelon and adjacent battalions.

(3) *Missions for battalion heavy weapons.* When visibility is restricted and fields of fire are short, heavy machine-gun elements may be designated to follow and support certain specified rifle units; it may be necessary to attach elements to rifle companies. If a lateral edge of the woods is within or near the battalion zone of action, heavy machine guns may advance by bounds near the edge to cover the flank and provide antiaircraft security. The heavy weapons company, less elements directed to support specific rifle units or to furnish flank protection, is ordered to follow the attacking echelon closely, generally in the center of the battalion zone.

(4) The employment of the antitank platoon depends primarily on the density of the woods. In fairly open woods, one squad is usually directed to follow closely each flank of the attacking echelon, and provide protection against attacks from the front and flanks. When a platoon of the antitank company is attached, flank guns may be reinforced with guns from that platoon. Where the woods are so dense that hostile tank attack is practicable only through such avenues of approach as roads or small clearings, guns are advanced by bounds to cover these approaches. If guns must be moved by hand, the attachment of additional personnel will be necessary. (See FM 7-35.)

(5) Effective employment of cannon company howitzers in woods is limited by difficulty in maintaining direction, contact, and control; short and obstructed fields of fire; scarcity of suitable routes for the movement of vehicles; lack of adequate observation; difficulty of adjusting fire on targets without endangering friendly troops; and vulnerability of the howitzers to by-passed enemy ground elements. Positions affording adequate mask clearance may be found at the edges of existing clearings. At times it may be necessary to clear openings from which direct or indirect fires can be delivered,

either by cutting or by fire against the obstructing growth; at other times, the action of howitzers may be restricted to the delivery of direct fires across existing clearings or along roads and trails for the engagement of targets of opportunity. Elements of the cannon company may be attached to designated infantry units in order to facilitate control and to insure local protection. (See FM 7-37.)

(6) *Instructions to the reserve.* Depending on the visibility within the woods the reserve is kept within 300 to 500 yards of the leading rifle elements.

(7) *Instructions for patrolling.* Instructions to the attacking echelon should provide for the establishment and maintenance of contact with the enemy by intensive patrolling during reorganization in the near edge of the woods.

(8) *Instructions for flank and rear protection.* Protection of the flanks and rear of the battalion is essential, since the concealment afforded by the woods offers opportunity for surprise attacks by hostile patrols or by hostile elements by-passed by leading rifle units. It is also frequently necessary to provide close-in rifle protection to antitank guns and mortars, by the attachment of small rifle elements from the reserve.

b. (1) While reorganization is being effected, the battalion commander confirms or modifies the tentative instructions he issued before the attack against the near edge; he starts the advance as soon as the reorganization is completed. Short halts are employed to check direction and contact and to restore control. These halts are preferably made at well-defined lines or areas, such as cross trails, streams, or near the edge of clearings. If satisfactory areas or lines are not found in the woods, halts on a time schedule, or after advancing a specified distance on an azimuth, may be prescribed. For the advance of the leading rifle companies in woods, see FM 7-10.

(2) Observers from supporting heavy weapons units, cannon company elements, and artillery accompany the attacking echelon. The battalion commander, accompanied by members of his staff and communication personnel, follows the attacking echelon closely and checks constantly the

maintenance of direction and contact. When necessary, a liaison detail consisting of an officer of the battalion staff or one from the reserve company, together with intelligence personnel, messengers, and a radio operator, follows each flank of the attacking echelon closely; at times these details will be with the patrols described in subparagraph *a*(2)(*b*) above. Instructions to these details should require them to report to the battalion commander at frequent intervals the location and situation of all units near which they are located and, when hostile resistance is met, to reconnoiter immediately and report the best method of employing the battalion reserve on their respective flanks.

c. Heavy machine guns are employed to cover roads, trails, and clearings, particularly during halts. When hostile resistance is encountered, the attacking echelon employs frontal and flanking action to overcome it. Machine guns fire from positions near and through gaps between rifle units. For further details, see FM 7-15. Assistance from 81-mm mortars, cannon company howitzers [see *a*(5) above], and artillery usually is limited by lack of observation and the difficulty of defining targets. The battalion commander, however, employs his mortars whenever overhead clearance permits them to fire and their fire can be observed and adjusted. Support from artillery and cannon company weapons is requested whenever necessary and practicable. Based on his own reconnaissance and that of his liaison details, the battalion commander commits the reserve to envelop hostile resistance or to meet hostile counterattacks. When required, elements of the reserve may be used to mop up areas passed through by the attacking echelon.

163. EXIT FROM WOODS. The battalion commander reorganizes his battalion short of the far edge of the woods. The attacking echelon is held deep enough within the woods to avoid hostile fires directed at the far edge, while scouts and patrols are pushed forward to reconnoiter the terrain, determine hostile dispositions, and protect the reorganization. The next objective of the battalion is selected; if possible, it should include terrain masking the far edge of the woods from hostile observation and small-arms fire.

Orders for the continuation of the attack are then issued promptly. If hostile artillery fire is expected on the edge of the woods, leading elements of the attacking echelon may be directed to debouch in a single rush; if the danger from small-arms fire is greater than from artillery fire, the debouchment may be by infiltration. Heavy weapons are brought up and placed in position to support and protect the attacking echelon during the debouchment. Any necessary arrangements for fire support are made with the artillery liaison officer and the cannon company representative. (See FM 7-40.) When preparations are complete, the advance is resumed and conducted as in any other attack.

Section X

JUNGLE WARFARE

164. REFERENCES. For details of Jungle Warfare, see FM 72-20.

165. GENERAL. The dense growth found on the shores, hills, and valleys of many tropical countries, offers a serious obstacle to operations. It may vary from mangrove swamp, palm trees, sugar cane plantations, bamboo, and other giant grasses near the shorelines and elsewhere, to the rain forests of palms, hardwoods, vines, and matted undergrowth which in the interior cover moist, swampy valleys and rocky or slippery hillsides; even semi-arid districts may contain forbidding growths of thorny trees, cactus, and abrasive vines and shrubs. Visibility is limited in places to as close as five to twenty yards. Trails must often be hacked and cut through vegetation so resistant that unopposed progress may be as little as a mile a day. Rolling terrain, and meadows of tall grass found on ridges and hillsides sometimes extend visibility and improve mobility. Enemy or friendly action may remove or radically change the character of the jungle; some types may be entirely blasted away by extensive shelling and bombing; sugar cane and tall, coarse grass, if partially dry, may be burned off by accident or design; such burning may influence a tacti-

cal situation in denying an area to personnel and producing a smoke screen. Troops should be given as much detailed information as possible concerning the kind of jungle in which they are about to operate.

166. INFLUENCE ON TACTICS. The principles of offensive combat, particularly of night attacks and attacks in woods (see secs. VIII and IX), apply to jungle operations, conditioned by the restrictions the jungle imposes on observation, maneuver, supply, and communication. The restrictions on observation affect reconnaissance, security, selection of objectives, useful range of weapons, and effectiveness of fire support. Details of the enemy position often cannot be determined prior to combat; however, the general extent of his area, or front and flanks, can frequently be determined. An initial objective is always given to each unit; by phase lines, if details are lacking. Flat-trajectory weapons follow the assault echelon ready to lend close support or to select vantage points, and advance by bounds. Mortars find or create gaps in the foliage canopy through which to fire; by the use of multiple firing positions, they make a relatively small gap serve for a variety of directions and ranges. Maneuver is hampered by the scarcity of trails; a battalion will often be forced to move in a column of files, with a depth exceeding a mile. Even with reduced frontages, development for attack is a lengthy process. The security of flanks and of the rear is a major problem for every unit. The necessity for long hand-carry places emphasis on light weapons. In many jungle situations, the ¼-ton truck is the only vehicular transportation suitable for supply of the battalion; it is used to the utmost for Class I and Class V supply, but must be supplemented by hand-carry. Friendly natives are of great assistance when obtainable and when skillfully handled through their own leaders.

167. COMMUNICATION. All infantry communication means are employed as appropriate. Telephones have proved very serviceable; even patrols sometimes lay wire. Radio usefulness is reduced by the screening effect of foliage and

of ground masks. Visual signaling is limited by vegetation and the overhead canopy of trees; but smoke, lights, and pyrotechnics may be used effectively by careful planning. Prearranged sound signals are important to security detachments. Foot messengers are the basic means of communication; these must be men of stamina and resourcefulness, who can work their way with assurance through the wilderness or along troop columns on narrow trails, and deliver their messages. Subordinate leaders must assure a constant flow of combat information from front to rear.

168. TANKS. Jungle terrain is unfavorable for tanks; however, where it is not positively impassable on account of heavy timber, rocks, steep slopes, or soft ground, their use against critical and definitely located enemy resistance should be given consideration due to their ability to create paths and bring armored fire power and crushing power directly to the enemy. Thorough reconnaissance of routes of approach, together with the use of simple pioneer constructions, frequently makes possible the employment of tanks even in dense jungle. Tanks are attached to infantry companies; the two elements operate closely together, the infantry providing close-in protection. Direct fire of tanks at short ranges with armor piercing shell can provide support for riflemen until they are within 25 yards of their objective. The principal value of the tanks will be in the use of their cannon, flame throwers, machine guns, and crushing weight in the destruction of enemy bunkers and other field fortifications. (See also FM 17-36.)

Section XI
ATTACK OF TOWNS

169. GENERAL. *a.* The characteristics of city, town, and village fighting favor the defense. The attacker will seek to isolate and bypass a town which has been developed into a strongly defended position rather than make a direct attack. However, some situations require that the town itself be assaulted.

b. When practicable, the populated area of a town is avoided; the defenders are blinded by smoke and neutralized by artillery and mortar fire while the attacking troops advance on one or both sides to seize the exits. In towns which cannot be avoided but are lightly defended, leading battalions advance rapidly through the town and seize the exits; the defense within the town is then mopped up by units following in rear. (See FM 100-5.) Attack by a leading battalion against a strongly held town which cannot be reduced by either of these methods is described here.

c. Attack through towns, particularly those in which the houses and buildings are close together, is characterized by limited observation, increased difficulty of control, and the necessity of attacking successive limited objectives. The battalion commander issues tentative orders for reorganization and the advance through the town at the time he issues instructions for the attack of the near edge. Aerial photographs of the town should be made available and detailed advance planning is ordinarily practicable.

d. When a town is so small as to be entirely within the battalion zone of action, the attack of a portion of the battalion should be directed to secure positions outside the town from which it can command the line of communication and retreat of the defenders and prevent their reinforcement.

170. ATTACK OF NEAR EDGE. The attack against a large town whose near edge or perimeter is not wholly within the battalion zone of action is similar to the attack against the near edge of woods. Units of the attacking echelon are assigned initial objectives on the edge of the town which are favorable for continuing the attack.

171. ATTACK WITHIN A TOWN. *a.* When the built up area consists of blocks of buildings such as business sections of cities and towns, where buildings must be attacked block-by-block, streets are usually designated as boundaries. The buildings are the immediate objectives and must be the responsibility of a single commander. In built up areas, as suburbs and residential districts, where the density of

buildings does not require a block-by-block attack, it may be desirable to designate boundaries within the blocks in order that the houses on both sides of the street will be included in the zone of one attacking unit. In this case, cross streets provide definite objectives near which halts can be made to restore contact and control. Direction is easier to maintain in towns than in woods, but contact and control are frequently more difficult to maintain. (See FM 31-50.)

b. Although the use of streets favors control and rapid advance, leading troops avoid streets as much as possible, as they are usually well covered by enemy and friendly supporting fires. The advance ordinarily will be from house-to-house through side yards; over rooftops; by breaching walls; or through back yards, or alleys. However, when required to advance along a street, the advance is made in two or more parties, each covering the opposite side of the street. The leading elements may move on the streets or through buildings and their adjoining yards. When the roofs of adjoining buildings are of such type as to permit free movement, detachments may be advanced along the roofs on each side of the street to prevent sniping from windows or house tops. Upon reaching a cross street the roof detachment covers the advance from roofs or commanding windows on the near side and then rejoins its unit. New roof detachments may be sent out at each cross street. Hostile resistance bypassed by the leading echelon must be promptly mopped up. The battalion commander either furnishes parties from his reserve to assist company supports in mopping up or directs companies to report any hostile groups they are unable to mop up without undue delay, and then uses his reserve to reduce these groups. Excavations such as cellars, are mopped up. Tunnels are reconnoitered and destroyed or blocked. Elements of the reserve are used to hold buildings already seized to prevent their reoccupation by the enemy. The battalion commander also employs elements of his reserve for close protection of his flanks and rear and for protection of supporting heavy weapons as for an attack in woods.

c. (1) Heavy machine guns are usually advanced by bounds behind the leading rifle units. They may be employed to sweep main thoroughfares at the principal intersections and to fire on any remunerative hostile targets encountered, particularly troops firing from doors and windows or from apertures in barricades.

(2) Mortars and artillery can ordinarily render effective support. Mortars are displaced as in any attack. Artillery and mortar observation is obtained from housetops, windows, and forward positions in streets.

(3) Cannon company elements are usually attached to battalions. (See FM 31-50.) During the advance toward the town, howitzer fires are delivered against the near edge, with particular attention to enemy automatic weapons occupying positions which permit flanking fires. Concentrations of fire are also placed on predetermined key points within the town. Howitzers also prepare to deliver fires to the flank for protection against enveloping enemy counterattacks. Cannon units displace promptly in order to continue their close support of leading attacking elements. Within the town, much of the close support of the attacking elements is furnished by infantry howitzers using direct fire against emplaced automatic weapons, strongly fortified buildings, and stationary or slowly-moving armored vehicles. They may also employ high-trajectory fire against targets sheltered behind distant buildings. (See FM 7-37.)

(4) In the attack of a large town, an antitank platoon and elements of the antitank mine platoon are frequently attached to each leading battalion. Antitank guns are often employed to neutralize automatic weapons located in fortified buildings or on the edge of the town, and which have not been neutralized by artillery, cannon company howitzers, or other supporting weapons. Within the town, all-round antimechanized protection is essential. Firing positions may be selected in buildings, taking advantage of doorways or loopholes knocked in the walls, in the debris of ruined buildings, or behind street barricades. Antitank elements must be closely protected by riflemen. In the attack of a small town which lies entirely within the battalion zone of action,

the antitank platoon, in conjunction with any attached or supporting element(s) of the antitank company, may be used to furnish protection to troops outside of the town, as well as within the town itself. (See FM 7-35.)

(5) Within a town, tanks may advance with infantry squads. Tanks fire against hostile street barricades and against hostile snipers or machine guns in buildings, and at other vantage points. In advancing on a street, tanks should be ready to move into a side street to avoid antitank gun fire. (See FM 17-36.)

172. EXIT FROM A TOWN. The battalion makes its exit from a town in a similar manner to that from woods. Machine guns may support the attack from firing positions located in buildings.

Section XII
ATTACK OF A RIVER LINE

173. GENERAL. *a.* For general principles governing operations at river lines, see FM 100-5. For technical details of stream crossing equipment and the use of assault boats, see TM 5-270. For the regiment in attack of a river line, see FM 7-40. For use of tanks, see FM 17-36.

b. When the enemy does not actively hold the river line or when our mobile ground forces have previously seized the far bank, a leading battalion is not actively employed until after reaching the far side of the river. In the usual case this is also true for a reserve battalion in an opposed crossing. After crossing, the operations of the battalion are similar to those for any attack except that, at least initially, ammunition may have to be brought across the river by boats or rafts and then hand-carried to weapon positions.

c. When the far bank of the river is held by the enemy, a battalion usually attacks the river line as part of its regiment operating in conjunction with other forces. The battalion may constitute a bridgehead force or it may cross as a subordinate unit of a larger bridgehead force. The mission of such a force is to effect a crossing and seize a

bridgehead in order to protect the subsequent crossing of other troops.

d. The regimental attack order usually includes the following information and instructions:

(1) Information of the enemy and information of terrain within the area of crossing operations.

(2) Mission, hour of crossing, zone of action, and objectives of the battalion, to include any feints which are to be made to divert the enemy.

(3) Plan for the air effort and the employment of the regimental cannon company, artillery, and other supporting troops.

(4) Engineer materiel and personnel which will assist in the crossing, including where and when they will be available.

174. RECONNAISSANCE. *a.* Preparations for the crossing include the search for all obtainable information, both of the enemy and the terrain, in the area where the battalion is to operate. Whenever practicable, ample time is allowed for daylight reconnaissance by all subordinate leaders, including the officer of the engineer unit with whose equipment the crossing is made. If the attack is to be launched on the following day, small patrols are sent under cover of darkness to the enemy side of the river for information of hostile strength, composition, and dispositions. These patrols must return to their units several hours before daylight in order that effective use may be made of the information obtained.

b. Personal reconnaissance by the battalion commander, supplemented by other directed reconnaissance and other sources of information, should develop all obtainable data concerning the following points:

(1) Composition and distribution of hostile forces, including the location of enemy weapons, mine fields and other defensive works, and undefended or weakly defended crossing points.

(2) Well-defined terrain features suitable as company objectives.

(3) Suitable locations for subordinate unit assembly areas on the hostile shore.

(4) Road and trail net on the enemy side of the river.

(5) Favorable routes of approach through the enemy position.

(6) Suitable terrain features on the near side of the river for observation posts and for position areas for supporting weapons.

(7) Location of favorable crossing points in the battalion zone of action, largely determined by—

(a) Width, depth, and current of the river.

(b) Existence of sand bars, reefs, islands, dams, or artificial obstructions placed by the enemy.

(c) Steepness and height above water of both river banks.

(d) Approaches to both river banks.

(e) Existence of fords, ferries, bridges, and old bridge sites.

(8) Exact location of concealed final assembly areas on the near side of the river. These should be readily accessible to trucks and identifiable at night.

(9) Concealed routes which lead directly from final assembly areas to the crossing points on the near bank.

(10) Rear assembly areas prescribed by the regiment.

(11) Routes from the rear assembly to the final assembly areas. For daylight movement concealed routes are selected. For movement during darkness, well-defined and easily traversed routes are selected.

175. PLANS. Based on the regimental commander's order and on the additional information secured through reconnaissance, the battalion commander prepares as detailed a plan as time permits. The details of the plan include—

a. Coordination with supporting and adjacent units.

b. Determination of width of crossing front, when not prescribed by the regimental commander.

c. Formation for the crossing; in particular, the units to cross in the leading wave and the designation and initial

location of reserve units.

d. Allotment of assault boats to units and assignment of other means of crossing.

e. Zones or frontages and initial objectives of leading rifle companies and determination of unit crossing points.

f. Establishment of local security on the far bank to protect the construction of foot bridges.

g. Formation for the advance to initial objectives.

h. Missions, firing position areas, and targets (or sectors of fire) and principal directions of fire for the heavy weapons company units, antitank platoon, and cannon company elements in support of the initial crossing, including the conditions under which fire will be opened.

i. Time of crossing of battalion supporting weapons and their employment after crossing.

j. Antiaircraft security during and after the crossing.

k. Antitank defense on the hostile shore.

l. Provisions for the early crossing of artillery and cannon company liaison details, cannon company reconnaissance personnel and reconnaissance details of the heavy weapons company and antitank platoon.

m. Secrecy measures.

n. Designation of final assembly areas with routes thereto and the hour of arrival of each unit.

o. Provisions for guides to lead units to their final assembly areas.

p. The place and time of contact between subordinate unit commanders and the engineer in charge of each group of assault boats or other material means of crossing.

q. Disposition of motor vehicles.

r. Ammunition supply, including necessary special measures.

s. Establishment of aid stations and method of evacuation.

t. Communication measures within the battalion and between it and the next higher unit.

u. Axis of signal communication and command posts.

v. Any special information concerning the initial location of the battalion commander, his time of crossing, and his location just after crossing.

176. ORDERS. In order to afford subordinate leaders the maximum time for reconnaissance and planning, the battalion commander issues appropriate warning orders as soon as practicable. The attack order is usually issued in fragmentary form and covers the movement from rear assembly areas on the near side of the river. The order should be specific and as detailed as practicable. At the initial objective the battalion commander usually must issue additional orders for the continuation of the attack.

177. WIDTH OF A CROSSING FRONT. *a.* The crossing front is usually prescribed by higher authority by means of boundary lines or frontages or by designating limiting points on the river between which the battalion is to cross.

b. The crossing is habitually made on a broad front. For protection during the crossing and ease of deployment after landing, intervals between assault boats during the crossing should roughly approximate the intervals between squad columns on land.

c. Crossing frontages vary widely. The following may be taken as guides which will rarely be exceeded:

Platoon	maximum	300 yards
Company	maximum	1,200 yards
Battalion	maximum	2,400 yards

178. FORMATION. The determination of the rifle strength to participate in the initial crossing depends upon the width of the prescribed zone of action, number of available assault boats or other crossing means, and the enemy situation. Rifle companies in the attacking echelon usually cross with three rifle platoons abreast. The battalion commander usually holds at least one rifle company or the bulk of it in reserve.

179. ASSIGNMENT OF CROSSING MEANS. *a.* Sufficient assault boats should be provided to accommodate the leading wave of the battalion; these boats are available for con-

tinued ferrying operations until the completion of foot bridges. Ponton equipment may also be made available for ferrying. One or more foot bridges are usually provided. Ropes strung across the river will facilitate the crossing and provide additional safety to personnel.

b. Tactical unity is maintained as far as possible in assigning personnel to boats and other crossing expedients. One satisfactory method of distributing them is as follows:

In assault boats:	Leading wave: Rifle platoons of attacking rifle companies.
	Second wave: Company command groups and weapons platoons of attacking rifle companies (less transport), reconnaissance parties of the heavy weapons company and of the antitank platoon, artillery forward observers, and cannon company reconnaissance personnel.
	Third wave: Heavy weapons company (less transport), forward echelon of the battalion command post, artillery and attached (or supporting) cannon company liaison personnel.
On improvised rafts or ferried in pontons:	Antitank platoon.
On foot bridge or ferried in pontons:	Battalion reserve, battalion headquarters company (less detachments), and medical section (less detachments).
By ponton-raft ferry, ponton bridge, or infantry support bridge:	All motor transport.

c. When the above means are not available, crossing may be effected by swimming supplemented by the use of the

boats, logs, rafts, shelter tent, truck cover and tarpaulin floats, and hand ropes, or aerial cable-ways. (See also FMs 7-10, 7-35, and 7-37.)

180. OBJECTIVES. *a.* The initial battalion objective assigned is usually a terrain feature the capture of which prevents effective hostile direct small-arms fire on the crossing points. Leading rifle companies are assigned portions of this objective as their initial objectives. Every effort is made to delimit these company objectives by clearly defined, easily recognizable terrain features.

b. The second objective of the battalion is usually an area the capture of which prevents hostile ground-observed artillery fire on the bridge sites in the river-crossing area and which can be supported by light artillery located on the attacker's side of the river.

c. The final objective is usually an area the capture of which prevents all artillery fire on the bridge sites and provides adequate maneuver space for further operations of the entire attacking force on the enemy side of the river.

181. ASSEMBLY AREAS. *a. Initial assembly area.* The initial assembly area, normally prescribed by higher authority, is usually within easy night marching distance of the river line and beyond hostile light artillery range. It should be concealed from enemy daylight observation.

b. Final assembly area. (1) The battalion commander selects final assembly areas for rifle companies and firing position areas for the heavy weapons company and antitank platoon. The final assembly areas of units in the leading wave are the localities where engineer troops distribute the boats along the foot routes to the river so that they can be readily picked up by infantry carrying parties.

(2) The chief attributes sought for final assembly areas are—

(a) Ease of identification at night.

(b) Accessibility to trucks or carrying parties which transport the assault boats to the final assembly areas.

(c) Concealment from hostile ground and air observation.

(d) Proximity to easily identified and concealed foot routes to the river.

(e) Proximity to the actual crossing fronts.

(f) Terrain suitable for distribution of troops parallel to the front. This distribution allows troops to proceed directly and without delay to embarkation points and permits them to cross the river simultaneously along the entire front.

(g) Cover from hostile artillery and small-arms fire.

182. MOVEMENT TO RIVER. *a. Movement from initial assembly area to final assembly area.* (1) The battalion commander causes guides from each subordinate unit to make daylight reconnaissance of their respective final assembly areas and of routes leading thereto from the initial assembly area. These routes are marked.

(2) Before the battalion leaves the initial assembly area, the following actions are taken:

(a) The orders of all subordinate units are completed.

(b) Personnel are divided into boat groups (each consisting of the infantrymen who are to cross in a designated assault boat) or are assigned other specific crossing means.

(3) When practicable, the troops move forward under centralized control until such time as subordinate units must diverge toward their respective final assembly areas. Company commanders adopt march dispositions which permit boat groups to move into their final assembly areas prepared to pick up their assault boats without reorganization or delay and carry them promptly to the river.

b. Movement from final assembly area to river. Upon arrival in final assembly areas, units of the leading wave are met by engineer guides and conducted silently to boat locations. Though the near edge of the river is in effect the line of departure, the initial advance is coordinated in the final assembly areas, and ordinarily no pause or further coordination is made at the river's edge; platoon leaders time the departure of the boat groups from the several final assembly areas so that assault boats of the leading wave are launched at approximately the same time. The boat groups guided

along previously reconnoitered and marked routes carry their assault boats to the river. A crew of three engineers is ordinarily assigned to each boat. All suitable forward routes from the final assembly area are used in order to avoid congestion and bunching on the more easily traversed routes.

183. CROSSING THE RIVER. Engineers operate and are in charge of the boats during the crossing. Each boat starts across as soon as loaded and proceeds as rapidly as possible by the most direct route to the opposite bank. No attempt is made to maintain formation of any kind while on the water, although intervals between boats should be preserved. Neither is any effort made to counteract drift by paddling upstream unless the relative positions of landing and embarkation points and the nature of the current have led the battalion commander to issue prior specific orders to that effect. Firing from the boat is rarely attempted in daylight; at night it is expressly prohibited. On reaching the hostile shore troops disembark rapidly. The engineer boat crews then return the assault boats to the friendly shore and continue ferrying operations.

184. ATTACK AFTER CROSSING. *a.* After crossing, men promptly clear the river bank and rally at prominent terrain features selected by their platoon leaders. Rifle platoons, followed by weapons platoons, then push forward to the initial objective, where company commanders reestablish control over their companies.

b. The battalion commander sends his heavy weapons forward to reinforce his leading elements and personally crosses the river as soon as he observes or is notified that any of the leading units have seized their initial objectives. Upon arrival at the initial battalion objective the battalion commander organizes the attack against his second objective. He pushes this attack home without delay, employing those rifle elements over which he is able rapidly to regain control. Capture of the second objective is promptly reported to the regimental commander, on whose order the attack against the final objective is launched.

185. SUPPORT OF CROSSING. *a.* Air participation and artillery support are arranged by the regimental or higher commander. He may place rifle and heavy weapons companies of reserve units and units not engaged in the initial crossing in positions from which they may fire on the far bank in support of the initial crossing wave. For daylight crossing, chemical troops are often made available to the bridgehead force, in which case the crossing is usually effected under cover of a smoke screen laid on the far bank.

b. (1) The heavy weapons of the battalion are initially emplaced in positions from which they are prepared to cover by fire the crossing of the landing wave. (See FM 7-15.)

(2) Usually the thick woods often found along a river line together with the wide crossing front compel the wide separation of heavy machine-gun platoons. When this is the case, mission type orders to support a particular rifle company during and after the crossing are given to each platoon.

(3) When practicable, the 81-mm mortars are emplaced in positions from which they can fire upon any hostile resistance, especially automatic weapons, located on the crossing front of the battalion.

(4) All heavy weapons (less transport) are crossed without delay when the far bank has been secured by the leading wave.

c. If suitable firing positions are available, the antitank guns are placed on the near bank so as to provide initial antitank protection to the leading wave on the far bank. If no such firing positions are available on the near bank, antitank guns are held under cover near the river. All guns cross as soon as the far bank is secured. They usually cross the river in pontons or by means of improvised raft ferries prepared by the engineers.

d. Howitzers attached to or in close support of the battalion are moved into firing positions immediately prior to the hour of attack, but do not open fire until the attack is discovered, and then only upon appropriate targets. Howitzers are placed as near the river as possible in order to cover effectively the principal crossing, but not so far forward that the noise made by prime movers destroys the element of sur-

prise. Position areas and observation posts are located with particular reference to the actual or probable locations of enemy supporting weapons, reserves, and observation posts on the far side of the river. Howitzers should be transported across the stream as soon as the attacking echelon has seized the first objective. After the crossing is effected the howitzers provide close support to the battalion during the advance to the second objective. If attached, they so remain until the second objective is captured, at which time they usually revert to company control and support the attack against the next objective as in any other coordinated attack. At the time of crossing, howitzers must have full organic loads of ammunition on prime movers; provision for early replenishment must be made in advance.

e. If the crossing is to be forced against a strongly held river line during daylight, the leading wave usually crosses under the cover of all available supporting fires. Otherwise the supporting artillery, infantry cannon, and heavy weapons remain silent until the crossing is discovered by the enemy.

186. SECURITY. After effecting a river crossing, elements of the battalion promptly establish security measures as for any daylight attack. Vigorous patrolling, especially on the flanks to secure early information of hostile counterattacks, is essential.

a. Antiaircraft security. The neutralization of all hostile air operations over the crossing area after the crossing is discovered is vital. Higher authority usually provides aviation and antiaircraft units for antiaircraft security. A part of the heavy machine guns of the battalion may assist antiaircraft units or may be employed in lieu thereof in antiaircraft missions.

b. Antimechanized defense. After crossing the river, antimechanized defense must be promptly established. Organic and attached antitank guns and antitank mines if available, are employed in the same manner as for any daylight attack.

187. SUPPLY AND EVACUATION. In river crossing operations the problems of supply and evacuation differ from

normal only between the time of landing of the leading wave and the subsequent crossing of motor transport.

a. Supply. (1) Individuals who participate in the initial crossing operations are usually provided with one or more individual reserve rations.

(2) Ammunition required in the initial phase of operations on the hostile shore is carried on the person and in assault boats. Some ammunition may be dropped on the far side of the river by parachute when airplanes are available. Ordinarily, however, the replenishment of ammunition for heavy weapons and antitank guns must be accomplished by hand-carry, via assault boats and footbridges, and is a serious problem. The battalion commander facilitates this supply by the following methods, either singly or in combination:

(a) He may set up an advanced ammunition supply point on the hostile shore close to the route of ammunition advance. By means of carrying parties especially detailed for the purpose, and by using boats, rafts, or footbridges, ammunition is moved from the battalion ammunition supply point on the near side to the advanced ammunition supply point. Ammunition is accumulated there and carried by hand to the using units on call, or is issued to carrying parties from front-line units.

(b) He may attach additional personnel to the heavy weapons company and the antitank platoon. These men assist the organic ammunition bearers to move ammunition from the ammunition supply point on the near side of the river direct to the using units.

b. Evacuation. (1) Casualties occurring on the near bank are usually evacuated to the regimental aid stations or aid stations of reserve units if they are in the vicinity, if not, the battalion aid station is set up on the near side of the river.

(2) The surgeon crosses with the battalion command group. The bulk of the battalion medical section usually crosses behind the battalion reserve. It establishes the aid station on the far side of the river without delay. The evacuation of casualties to the rear from this aid station is limited

to those who can be transported in returning assault boats until such time as footbridges are completed.

188. SIGNAL COMMUNICATION. *a.* (1) The forward echelon of the battalion command post usually crosses in the third wave of assault boats. The remainder of the command post personnel and equipment crosses not later than the capture of the initial objective; usually it displaces forward to the far side behind the reserve. Wide latitude is accorded the battalion commander in the selection of command posts.

(2) Due to the difficulties of control the prompt and accurate reporting of company command post locations is emphasized.

b. (1) Prior to the departure of the leading wave from the near river bank, the usual communication agencies are normally employed except that radios remain silent if in the interest of secrecy.

(2) With the crossing of the leading wave the ban on the use of radio is usually lifted. The voice radio then becomes the chief means of communication between the battalion commander and his forward elements.

(3) Higher headquarters may furnish additional voice radios to the battalion.

(4) Communication to the front and rear is maintained initially by radio, visual signals, and messengers. When available, pigeons and airplanes may be used for communication to the rear.

(5) Wire lines are usually extended across the river on foot or ponton bridges. They can rarely be strung over the river unless the stream is very narrow.

189. IMPROVISED MEANS OF CROSSING. *a.* Improvised means of crossing a stream are employed by the battalion when standard crossing facilities are not available in sufficient quantity, or when the situation demands an attack of the river line before engineer crossing means can be procured.

b. (1) The principles and technique of crossing with improvised means are the same as for crossing with standard

equipment and are applied as completely as time and facilities permit. The means employed to cross may consist primarily of swimming supplemented by the use of boats, logs, rafts, and any other suitable material found in the neighborhood.

(2) The shelter tent float, which can be prepared by two riflemen in 7 minutes, is one improvised means of ferrying rifle company combat equipment. For details of construction, see FM 7-10. Ammunition and other supplies vital to the initial stage of the operation on the enemy side are apportioned to the two-man teams and ferried across.

(3) As soon as the far bank has been secured by the leading echelon, antitank guns and heavy weapons are ferried across promptly by means of amphibious vehicles, improvised pontons, brush rafts, and other expedients. (See FMs 7-15 and 7-35.)

c. (1) If the ammunition train and kitchen and baggage train are released to the battalion, the canvas covers of the 2½-ton trucks are available for use in floating ¼-ton trucks as described in FMs 7-35 and 7-37. Box frames and outriggers may also be used for ferrying ¼-ton trucks.

(2) Other transport is usually left under cover on the near side of the river until such time as bridges or heavy rafts can be constructed.

Section XIII
ATTACK OF A FORTIFIED POSITION

190. CHARACTERISTICS. A fortified position is a defense area which contains, in addition to usual defensive works, numerous steel or concrete defensive works deliberately placed to resist the penetrating action of high power projectiles and block access to the position. The defensive works usually consist of fortified weapon emplacements, or bunkers, and protected shelters, together with intrenchments and obstacles. For a general discussion of the employment of infantry in an attack against a fortified position, see FM 100-5. For further characteristics of permanent works, the organization of assault units, and more detailed methods of at-

tacking a fortified position, see FM 31-50. The general characteristics of this operation pertaining to the battalion are as follows:

a. Usually a wide continuous antitank and antipersonnel obstacle must be breached to reach the hostile position. The position itself may be organized in great depth.

b. Because of the completeness of the defensive preparations local counterattacks must be expected early in the attack, and more powerfully supported counterattacks as the penetration is deepened and widened.

c. Thorough reconnaissance is required; detailed information of the enemy is essential.

d. Ordinarily, a relatively long time is available for preparations. When this is the case, rehearsals should be conducted on terrain similar to that which is to be attacked, with mockups duplicating the enemy defense system.

e. Stringent measures must be taken to insure secrecy.

f. Initially, the attack is methodical and is made according to detailed plans. Each bunker or other fortified emplacment must be the specific objective of a designated unit. The sequence of engaging such features is based upon a thorough understanding of the enemy's situation and defense plan; this takes into consideration the armament, sectors of fire and dead space of these features. In the later stages coordination by higher commanders will be reduced, and initiative and bold action by subordinate commanders will be required.

g. For the initial phase of the attack, plans as well as orders to subordinate units must be in great detail.

191. PLAN OF ATTACK. The battalion plan of attack must be based upon careful reconnaissance, including a thorough study of aerial photographs and of the reports of visual air reconnaissance. It must be coordinated with the plans for the employment of aviation and supporting weapons which are controlled by higher commanders.

a. Attachments. Attached elements may include engineers with demolition equipment, additional antitank guns, antiaircraft guns, regimental cannon company elements, chemical units, tank destroyers, and tanks.

b. Attacking echelon. The battalion commander directs the organization of assault detachments within the rifle companies, and their reinforcement with special equipment such as flame throwers, bangalore torpedoes and other demolition charges. The size of assault detachments and their special equipment will vary to meet the needs of particular situations. Their mission is to breach wire and reduce fortified works. Companies in the attacking echelon support the action of assault detachments by neutralizing hostile elements able to interfere with the latter and by capturing intrenchments supporting the permanent works. They rapidly occupy and hold all ground gained. They replace casualties in assault detachments and furnish new detachments. Engineers (or other specially trained troops) will usually prepare crossings over and through antitank obstacles including the clearing of gaps through mine fields. They may reinforce an assault detachment where a large amount of demolition work is anticipated. Tanks and engineers cooperate in placing demolition snakes where they will destroy obstacles and emplacements, and open up gaps for the entry of both tanks and infantry into the position. (See par. 136.)

c. Reserve. The reserve usually consists of at least one rifle company. (See par. 135*f*.)

d. Supporting weapons. Employment of the battalion heavy weapons and antitank guns and of supporting elements is similar to that for any attack. In a fortified position each strong point is supported usually by the fire of one or more adjacent strong points. Supporting weapons, by their fire, isolate enemy positions assigned as objectives to assault rifle elements by neutralizing those enemy strong points which support the objectives. Principal differences are as follows:

(1) Planning for their use in the initial attack will be more detailed.

(2) Antitank guns, tanks, and tank destroyers may execute direct fire on loopholes and openings in hostile fortifications.

(3) Mortars will fire a large proportion of smoke and heavy shell.

(4) Machine guns and mortars will frequently participate in preparatory fires.

(5) Emphasis is placed on the use of armor-piercing ammunition which will penetrate and destroy concrete and steel defensive structures.

(6) Infantry howitzers may be employed for direct fire against steel embrasure doors, or against slits and loopholes.

192. PREPARATIONS. Preparations include thorough training of all personnel in their assigned duties and training of replacements for key members of assault detachments. The battalion commander arranges for a rehearsal of the initial phases of the attack. Because of the difficulties of blinding or neutralizing all hostile observation, the preparation of gaps through the obstacles in front of the hostile position will usually be made at night or under a dense smoke screen. Therefore rehearsals of assault detachments charged with preparing these gaps should be conducted under similar conditions.

193. CONDUCT OF ATTACK. *a.* Under cover of darkness or a dense smoke screen, the troops move to the line of departure, and direct-fire guns move into position. The companies move forward in the attack under cover of artillery fires, direct gunfire, smoke, and other battalion supporting fires. The assault detachments breach the wire and advance on the forts, bunkers, or pillboxes, maneuvering to take advantage of dead spaces in the fires from embrasures. Before the direct-fire guns lift, the embrasures are taken under fire by weapons within assault detachments. Under cover of these fires, of local smoke, and the protection afforded by fire and maneuver of other elements of the companies, the assault detachment moves in and reduces the fortification.

b. Prompt action is taken to mop up and guard against the reactivation of these fortified points and any underground passages. Assault detachments, resupplied with key men, or fresh assault detachments which have taken their place, push on to reduce other permanent works.

c. The battalion commander is alert to act quickly when unexpected resistance or obstacles are encountered within the

position; he promptly employs his reserve, when necessary, to keep his attack moving and to meet hostile counterattacks. As the attack progresses and control becomes more difficult, he may attach supporting weapons to attacking rifle companies.

194. ATTACK OF A WELL-ORGANIZED POSITION. An attack against a position which the enemy has held over a considerable period of time, but on which he has not built permanent fortifications, closely resembles an attack against a fortified position. Similar care is required in planning and in organization, but usually there will be no time for rehearsals since the longer the attack is delayed the more time the enemy will have to prepare his defense. The same constant alertness and timely action to defeat counterattack are required.

Section XIV
RAIDS

195. GENERAL. *a. Purpose.* Raids are made to capture prisoners; to capture or destroy materiel; to obtain information of hostile dispositions, strength, works, intentions, or methods of defense; and to inspire confidence and aggressiveness in the raiding troops and harass the enemy.

b. Characteristics. A raid is an attack followed by an instant withdrawal upon accomplishment of the mission. Unless carefully planned and executed, the withdrawal is the most difficult and costly part of the operation. Flank security is of vital importance, since both flanks of the raiding force are exposed.

c. Initiation. Unless the battalion is detached, raids are usually ordered by the regimental commander. When he orders a raid, the regimental commander issues instructions covering its purpose and the fire support to be furnished the battalion. Frequently he will also prescribe the area to be raided, the size of the force to be employed, and the date and hour of the raid.

d. Classes. (1) Raids are classified as supported and un-

supported.

(2) Supported raids may be made in daylight or darkness. They depend for protection on surprise and the fires of supporting weapons.

(3) Unsupported raids are conducted without the fires of supporting weapons and depend primarily on surprise and on darkness, fog, or smoke, for protection.

(4) When the mission requires the capture of a few prisoners, followed by immediate withdrawal, an unsupported raid by a small force is preferable. When the mission requires the use of a larger force, or that the raiding force remain in the hostile position for any length of time, the fires of supporting weapons will usually be required for adequate protection, particularly during the withdrawal.

e. Organization of raiding force. The raiding force is subdivided into smaller task forces, each organized and equipped to accomplish a specific purpose. Task forces may include assault parties for accomplishing missions within the hostile position, parties to provide security for the assault parties, parties for handling prisoners or removing captured materiel, and a reserve party for use in emergency. Advance and flank security parties are provided to deal with hostile patrols to the front and protect the flank. The exact organization varies with each situation. Tactical unity is maintained as far as practicable; however, each party should be organized for the specific mission which it is expected to accomplish.

196. SELECTION OF AREA TO BE RAIDED. *a.* The area to be raided should be one which is lightly defended, or one which is difficult for the enemy to defend because of restricted fields of fire. In daylight raids, covered routes of approach and withdrawal are desirable.

b. The selection of an area close to friendly front lines and the absence of serious obstacles or difficult ground to traverse, speeds up the raid and facilitates the withdrawal. In the case of a supported raid it also facilitates fire support.

c. If the raid is to be supported the area should be so located that it can be isolated by placing fires to neutralize

adjacent and rearward hostile positions without endangering the raiding force.

197. SIZE OF RAIDING FORCE. The size of the raiding force should be kept to the minimum which can reasonably be expected to accomplish the purpose of the raid. As the size of the raiding force increases so do the difficulties of achieving surprise, control, and speed of execution.

198. RAIDS BY THE BATTALION. The battalion as a unit engages only in supported raids. Each plan must be devised to fit the existing terrain and situation. A simple plan, thoroughly understood by all the raiding troops, and thorough reconnaissance are essential. Subordinate commanders should make at least one night reconnaissance in addition to that made in daylight, if the raid is to be made at night.

a. Date and hour of raid. The maximum amount of time should be allowed for reconnaissance, planning, registration of supporting fires, and rehearsals. At least one night should intervene between the receipt of orders for the raid and its execution. Supported raids are preferably carried out at dawn, twilight, or under similar conditions of low visibility, in order to limit hostile observation and yet have enough light for close combat purposes. However, supported raids have been sucessfully executed both in broad daylight and in full darkness. Successful execution of a raid in broad daylight in usually dependent on the ability to blind all artillery observation posts with smoke.

b. Routes of advance and withdrawal. (1) Unless the raid is to be conducted under cover of full darkness, fog, or smoke, a covered route (or routes) of approach should be utilized and the raid launched from the last covered position. Under conditions of reduced visibility, flank and advance security parties precede the battalion in ample time to clear hostile patrols from the area and prevent premature discovery of the raid.

(2) Whenever practicable, the withdrawal is made by route(s) other than those used in the advance. In any case, the route(s) of withdrawal must avoid the known or suspected location of all hostile defensive barrages, as the enemy

is certain to put down these defensive fires before the raid can be completed. Similarly, road intersections or other prominent landmarks are avoided.

c. Rallying points. The battalion commander prescribes a rallying point for each rifle company. It should be a concealed and defiladed locality within the friendly lines. Its purpose is to enable units to be promptly reassembled and to facilitate the prompt collection and transmission to higher headquarters of all materiel, prisoners, and information gathered in the course of the raid.

d. Passage of enemy obstacles. A raid against a well-organized position must usually overcome enemy barbed wire entanglements. Barbed wire is usually cut by leading elements with wire cutters in accordance with prearranged plans. If the wire is too extensive for this to be done rapidly, surprise may have to be forfeited by employing artillery to destroy the entanglements or by using Bangalore torpedoes to blow out sections of the wire. Some types of wire may be crossed without cutting by using chicken wire rolls. Mine fields are, if practicable, neutralized in advance. Even if this is done, however, the leading elements of the raiding party must include men experienced in detecting and disarming mines and booby traps. They will breach the mined area without forfeiting the secrecy of the attack; at the conclusion of the attack, they may be required to open another lane(s) for withdrawal.

e. Training. Time is often available for rehearsals, particularly in a stablized situation. At least one daylight rehearsal and, for night raids, an additional night rehearsal should be held whenever possible. These rehearsals should be conducted on ground that is similar to the area to be raided.

f. Equipment. (1) The battalion commander prescribes the equipment to be carried. For night raids similar equipment and means of identification to those for night attacks are prescribed. (See par. 157*o* and *p*.)

(2) Measures are frequently taken to make the appearance of the troops blend with the terrain. For example, white cloth may be worn over the uniform to match snow; at other times both the clothing and the hands and faces may be

smeared with mud, pot black, or charcoal.

(3) If the purpose of the raid includes the capture of heavy or cumbersome materiel, some improvised means of towing or carrying this equipment may have to be prepared in advance. Tanks may be employed for this purpose.

(4) Rehearsals should be conducted with the troops carrying the exact equipment prescribed for the raid.

g. Supporting fires. (1) Supporting fires should neutralize all hostile positions within effective radius of the area to be raided and box in the area so as to isolate the defending troops. These fires must be precisely prearranged as to targets and as to signals to be used. Supporting fires may begin either at a specified time or upon call (by prearranged pyrotechnic signal and voice radio) of the raid commander. Signals are also used for shifting or lifting fires.

(2) Since the prescribed fires must be accurately placed under any conditions of visibility, they should be registered in advance. In order to preserve secrecy, registration should cover a considerable number of points in addition to those for which data are desired and, if possible, should be spread out over a period of more than 1 day.

(3) Artillery may be employed to box in the objective by fire on adjacent and rearward hostile positions and on avenues of enemy approach both during the raid and to cover the withdrawal. Supporting fires prior to the raid may sacrifice secrecy and surprise; however, the strength of the position may require that a short preparation be placed on the area to be raided.

(4) Mortars extend or fill gaps in the fires of the artillery. Heavy machine guns place bands of fire near the flanks of the area; they may also be employed to thicken the artillery preparation.

(5) If certain weapons are to fire on more than one target during the raid, specific instructions as to when their fire is to be shifted are included in the order.

h. Withdrawal. The time when the various elements of the raiding force start back to their own lines is either designated in advance or announced by a prearranged sound or

pyrotechnic signal.

i. Conduct. (1) If made at night or under conditions of reduced visibility the raid is conducted in a similar manner to a night attack (see sec. VIII); if conducted in daylight it will differ from any other daylight attack principally in the rapidity with which it is carried to a conclusion. The withdrawal of the assault parties is covered by the advance and flank security parties.

(2) The principal duties of the battalion commander during the raid will be to decide when to call for, shift, or lift supporting fires, to be constantly on the alert for unexpected hostile reactions, to take prompt and adequate measures to meet any unforeseen emergency, and to decide when to order the withdrawal.

199. RAIDS BY ELEMENTS OF THE BATTALION. For further discussion of the rifle company in supported and unsupported raids, see FM 7-10.

a. Supported raids. The battalion commander designates the officer to command the raiding force and, taking into account his recommendations, prescribes the composition of the force and arranges for the necessary supporting fires. He prescribes the mission, time, objective, route of advance, route of withdrawal, and rallying point for the raid. He insures that ample opportunity is allowed for day and night reconnaissance and arranges for rehearsals if these are contemplated. The organization of the raiding force and the detailed instructions for its conduct are usually left to the discretion of the commander of the raiding force. Adjacent and supporting units are informed of the raid.

b. Unsupported raids. The battalion commander selects the rifle company to furnish the raiding force. He assigns the mission, approximate time, and objective of the raid; he usually leaves other details to the rifle company commander and the commander of the raiding force. He insures that all adjacent troops are informed of the raid and of the route of advance and withdrawal.

Section XV

BEACHHEADS

200. GENERAL. Landings on a hostile shore are made by joint task forces to seize an adequate area (beachhead) for further operations. The ground, air, and naval components participate jointly. In broad principle, the navy is responsible up to the time that the beachhead is established. Normally authority superior to the battalion does much of the planning. It selects the beaches; allocates the ships and the landing craft and supplies much data on their characteristics to the battalion landing team commander; indicates the place and time of landing, the mission and objectives; and briefs the troops as to the terrain and the enemy situation. Certain loading and landing tables may be provided, but organization of the battalion for assault will be a responsibility of the battalion commander. Beaches are studied by means of maps, charts, models, air photos and air and amphibious patrols and reconnaissance; battalion commanders participate in air reconnaissance when practicable. Troops are combat-loaded on ships with all essential equipment; this includes weapons, organic loads of ammunition, rations, water, and properly waterproofed communication equipment and indespensable transportation. For further details, see FMs 7-35, 7-37, and 31-5.

201. RESPONSIBILITY OF NAVY. *a.* The navy controls the ship-to-shore or shore-to-shore movement; it moves the troops in a series of waves of landing craft, in compliance with the army plan, coordinating on a naval line of departure two miles or more off shore. The battalion landing team, under normal conditions on one combat loaded transport, (APA), or on several landing ships or crafts, may be conveyed ashore in a varying number of waves. Normally the entire battalion landing team can be lifted in one trip of the available landing craft or amphibian tractors. An illustration might be:

1st Wave)	Attacking rifle companies, specially or-
2nd Wave)	ganized as self-sufficient boat teams.

3rd Wave)	Heavy weapons company, battalion com-
4th Wave)	mand group, and sections of shore party (service troops).
5th Wave)	Antitank platoon, medical detachment, and remaining battalion elements.
6th Wave)	Attached units including artillery, and the remainder of the shore party.
7th Wave)	Tanks, if employed.

Conditions may dictate the placing of tanks in an early wave.

b. The length of time required to place the battalion landing team on shore depends on various naval factors such as distance and speed of boats. For reasons of secrecy and concealment, night may be the best time for landing. If so, it is desirable that the first wave be started at such an hour that the last waves reach shore by dawn in order to give the attacking companies the benefit of the complete team support. *A beach party (navy personnel)* commanded by a beachmaster, receives, dispatches and controls the landing craft at the beach. The beachmaster is an assistant to the Shore Party Commander. The *shore party (army personnel)* has responsibility for the logistic support of the battalion landing team in organization and operation of beach activities.

202. INSTRUCTIONS TO BOAT TEAMS. Members of each boat team are given special objective training for assault, and detailed instructions as to their equipment and conduct. Each man has his designated place in the boat. Personal equipment is light. Bayonets are fixed just prior to landing. Smoking is prohibited. Troops crouch low. They habitually debark at the run, at high port, alternately to right and left, breach such obstacles as oppose them, and fight as a team at least to the first objective.

203. CONDUCT OF THE ATTACK. An initial objective, unmistakably identified, must be given each of the attacking boat teams before they land; it will generally be the first enemy-held terrain feature, or the first terrain feature affording firing positions for the boat teams. Successive objec-

tives may be indicated by the regimental commander in the form of beachhead phase lines and zones of action. Once ashore, the battalion operates according to the principles of offensive tactics. The water's edge is the infantry line of departure. At the first objective or phase line, company and battalion commanders may regain control without delaying the advance. Every effort is made to get inland from the beach, thus clearing it for following troops, and to deprive the enemy of his observation of the beach. Initiative is at a premium. Boats or waves may go astray. Troops must be prepared to land at an unexpected place, and fight on the wrong beach. Assault riflemen can expect an early counterattack by enemy tanks and should be prepared to fight with rocket launchers and antitank rifle grenades if antitank guns have not yet been landed. Prompt dispatch to the regiment of information on the situation, particularly the gaining of objectives, and enemy strength and activity, is of utmost importance.

204. COMMUNICATION. The establishment and maintenance of communication is vital to landing operations. This is provided for by care in waterproofing, landing, and promptly installing the organic equipment; by provision for special personnel and equipment in the shore party to communicate with higher headquarters still on shipboard; by cooperation with naval agencies; and by prearranged visual means, particularly colored lights and beach markers.

205. FIRE SUPPORT. If profitable targets have been accurately located, air bombing or preparatory naval fires may precede the landing. Considerations of secrecy may, however, dictate the withholding of naval fires until the landing is discovered. Close fire support by naval guns is controlled through a joint liaison party, the shore fire control party, which functions with each landing team. Normally a battery of light artillery is attached to each assault battalion. Massing of artillery fires will not be possible until the regimental combat team is ashore. In night attack antitank and antiaircraft weapons should be ashore by dawn ready to resist armored counterattack. Cannon elements should also be

205

available for targets of opportunity, including halted armored vehicles. Rifle companies must, however, be prepared to take and hold objectives by their own means over a considerable period.

Chapter 9
THE DEFENSE

Section I
GENERAL

206. REFERENCES. For fundamental doctrines of defensive combat, see FM 100-5. For principles governing defensive combat of the infantry regiment, see FM 7-40. For measures to be taken for individual protection and concealment and for types of emplacements for weapons, see FMs 7-10, 7-15, 7-35, and 7-37. For tactics of the battalion antitank platoon and details of antimechanized defense, see FMs 5-30 and 7-35. For the employment of tanks and tank destroyers with infantry, see FMs 17-36 and 18-5. For employment of artillery, see FM 6-20. For principles governing signal communication in the defense, see FMs 7-25 and 7-24.

207. REGIMENTAL DISPOSITIONS ON BATTLE POSITIONS. *a.* A regiment assigned to the defense of a sector of the battle position distributes its elements in three echelons: security forces, holding garrisons, and a reserve. It usually assigns two battalions to the defense of the main line of resistance (holding garrisons) and holds one battalion in reserve. The security echelon may be furnished by the holding garrisons, by the division, or initially, by the reserve battalion.

b. The regimental commander assigns battalion defense areas to the holding garrisons by designating boundaries and limiting points. He may include further detailed instructions concerning the trace of the main line of resistance. Boundaries define the lateral limits of responsibility. They extend forward as far as the range of the weapons with which the battalion is equipped and include the combat outpost line in order to fix the responsibility for the defense of the latter. They extend rearward at least as far as the rear limits of the battalion defense area. Easily recognizable terrain features are designated as limiting points, where commanders arrange to meet, or send representatives to meet, to coordi-

nate their defensive dispositions and insure mutual fire support. (See par. 225*a*.)

208. SIGNAL COMMUNICATION. Maximum coordination of the efforts of the elements of the defending force, execution of the fire plan, and cooperation with adjacent units cannot be secured without a well-developed and efficient system of signal communication adapted to the type of defensive action contemplated. All means of signal communication available in the offense are usually available for defensive operations. Familiarity with the terrain, relatively greater time available for planning and installation, and prior provision of greater quantities of signal supplies make it possible to develop elaborate signal communication systems, including wire lines, to small infantry units.

Section II

FRONT-LINE BATTALION

209. FRONTAGE AND DEPTH. A battalion occupying a defense area on the main line of resistance will usually be assigned a frontage of 1,000 to 2,000 yards, depending on the defensive strength of the terrain. When a battalion occupies a vital area having poor observation and poor fields of fire, such as in heavily wooded, broken terrain, the frontage should not exceed 1,000 yards. Where the area is more open and affords longer fields of fire, a frontage of 1,500 to 2,000 yards may be appropriate. On flat, open terrain as much as 2,500 yards may not be excessive. Exceptionally, when obstacles in front of the position, such as swamps or streams, make a strong attack against the area improbable, a frontage of not to exceed 3,500 yards may be assigned. The depth of the defense area may vary from 800 to 1,400 yards. The regimental commander may indicate the depth of the area by the rearward extent of the battalion boundary or by the designation of a terrain feature. The battalion is responsible for the defense of its assigned area. All installations of the battalion are contained within the area with the exception of administrative installations such as the battalion ammu-

nition supply point. Regimental approval is obtained before any such installations are located outside of the assigned defense area.

210. MOVEMENT TO BATTLE POSITION. The battalion commander places his unit without loss of time in the area which it is to defend in order to afford the maximum time for the construction of defensive works. As soon as the battalion defense area is designated by the regimental commander and before beginning his reconnaissance, the battalion commander, after a map study, provides for the resumption or continuation of the movement of his battalion toward the assigned area. He arranges for subordinate commanders to precede their units and furnishes them with transportation when practicable. He will usually designate, within the defense area, assembly area(s) to which the battalion, under command of the executive officer, is to move. However, when practicable, the battalion commander makes timely decisions which will enable subordinate units to move directly to their assigned defense areas without halting in assembly area(s) and begin the work of organization. The battalion is responsible for its local security during the movement to the position and throughout its organization.

211. RECONNAISSANCE. *a.* The reconnaissance of the battalion commander will be as detailed as time permits. In the hasty assumption of the defensive, a map study may take the place of a reconnaissance.

b. In the assumption of the defensive while out of contact with the enemy, the battalion commander will ordinarily direct S-3, the communication officer, the heavy weapons company commander, commanders of attached units, and the artillery liaison officer to accompany him on reconnaissance. Other personnel may be directed to make detailed reconnaissance and report on specified areas or to reconnoiter and recommend locations for installations, weapons, and mine fields.

c. The battalion commander first identifies the area the battalion is to occupy and selects covered approaches into the area. He then makes a plan for his own reconnaissance, in-

cluding the route he will take. His further reconnaissance determines the following:

(1) The most likely avenues of approach for hostile foot troops and armored forces.

(2) Localities to be occupied by security forces in order to screen the position from close hostile observation. (See par. 223.)

(3) Any natural obstacles in the foreground, or terrain features that can be converted readily into obstacles.

(4) Demolitions to be effected.

(5) Key points within the battalion area, the retention of which by the battalion and subordinate units is vital to the defense, particularly those which afford essential observation.

(6) The trace of the main line of resistance.

(7) Boundary and limiting point between companies.

(8) General locations for machine guns in close support of the main line of resistance.

(9) General locations for 81-mm and attached chemical mortars and areas to be covered by their fires; areas into which supporting cannon company elements are to be prepared to fire.

(10) Details of defensive fires and barrages to be requested from the supporting artillery. (See FMs 6-20 and 7-40.)

(11) General locations for antipersonnel mines, booby traps, and wire entanglements.

(12) General locations for antitank weapons and mines.

(13) General locations for rear machine guns. [See par. 216*a*(2).].

(14) Locations of suitable attack positions and routes thereto for counterattacking tanks.

(15) Locations to be organized by the battalion reserve; its assembly area, if held mobile, and its direction(s) of counterattack.

(16) Location of observation post(s) from which the bat-

talion area and its surroundings can be viewed.

(17) Location of the aid station, ammunition supply point, command post, and alternate command post.

212. PLANS. *a.* The defense plan includes security, distribution, and missions of rifle companies and all weapons under battalion control, coordination of fire, use of the reserve (to include counterattack), employment of attached tanks for counterattack or for reinforcing fires, ground organization, communication, and administration.

b. If the defense is assumed in contact with the enemy and the situation does not permit a complete reconnaissance and coordinated plan of defense, the battalion commander indicates the general trace of the main line of resistance and may initially attach heavy machine guns and attached tanks to rifle companies for their immediate protection. As soon as practicable these initial measures are readjusted into a coordinated defense of the battalion area.

213. SELECTION OF MAIN LINE OF RESISTANCE. *a.* The main line of resistance is located to protect vital terrain; it may be located on either a *forward* or *reverse* slope. It is traced to provide as many as practicable of the following advantages:

(1) Retention of essential observation to the front and flanks, particularly for artillery.

(2) Concealment of defensive works from air and ground observation.

(3) Denial of close hostile observation into the position.

(4) Good fields for grazing and flanking fire of automatic weapons.

(5) Best possible use of natural obstacles, particularly antitank obstacles.

(6) Terrain that facilitates counterattack.

b. The trace of the main line of resistance will be irregular and contain minor salients and reentrants to facilitate the development of flanking fire. The formation of large salients and reentrants is avoided. The defense areas on the main line of resistance must be mutually supporting, and capable of all around defense.

c. A battle position with its main line of resistance on a *forward slope* offers certain inherent advantages. From such a position the benefit of observation from the forward slope is obtained; and control of the key points affording observation for artillery, supporting weapons, and commanders is retained. A main line of resistance on the forward slope usually possesses the most effective fields of fire for flat-trajectory weapons and positions from which to observe, to cover by fire, and so to maintain the integrity of the natural and artificial obstacles in front of the position. By extension of the rear limits of the company defense areas on the main line of resistance to the reverse slope, concealed and defiladed routes of communication which facilitate movement of troops and supplies and the efficient use of control agencies are obtained.

d. (1) The main line of resistance is located on the *reverse slope* when the lack of cover and concealment permits enemy observed fire, particularly from direct fire weapons, to make the forward slope untenable; when better fields of fire for flat-trajectory weapons are available; or when necessary to avoid dangerous salients and reentrants. Initially, the forward slope may be used for observation, but in selecting a reverse slope position, the battalion commander must insure that essential observation from locations other than the forward slope are available. The reverse slope may be selected when control of the forward slope has been lost or has not yet been gained, or when the forward slope is otherwise unsuitable for defense. Fire plans should provide for maximum concentration of artillery and mortar fires on the forward slope and crest. The main line of resistance should be covered by supporting fires from positions next in rear as well as from the flanks. Reverse slope positions are strengthened by automatic weapons located on or just forward of the topographical crest so that effective fire can be brought to bear on attacking troops during their approach. The weapons so located should have enough overhead protection to insure their safety during a heavy volume of artillery fire. Antipersonnel mines and wire may be employed effectively on the forward slope.

(2) In general, the combat strength of a reverse slope defense results from fewer casualties suffered from enemy fire, losses inflicted on the enemy during his approach to the position, and immediate counterattack by relatively fresh troops before the enemy has had time to establish himself.

214. BOUNDARIES AND LIMITING POINTS. The front-line company defense areas are assigned by indicating the main line of resistance and designating a boundary between companies and a limiting point on the boundary where the front-line company commanders are to coordinate their defenses. (See par. 207*b*.) The boundary is fixed so as to assign frontages to the front-line companies in accordance with the defensive strength of the terrain and the amount of supporting fires allocated to the area, avoiding, as far as practicable, the division of responsibility for the defense of key terrain and critical avenues of approach. Company boundaries are extended forward for at least 500 yards and to the rear to the limit of the company defense areas. In close, broken terrain with short fields of fire, a rifle company can defend a width of about 500 yards. In more open terrain it may be assigned a frontage of 1,000 yards or more. The depth of the defense area assigned to a rifle company usually does not exceed 700 yards.

215. DISTRIBUTION OF RIFLE COMPANIES. The battalion commander usually places two rifle companies on the main line of resistance and holds one in reserve. (See fig. 10.)

a. Organization of front-line companies. Front-line rifle companies distribute their rifle platoons in width and depth; usually two platoons are assigned defense areas on the main line of resistance and one platoon is placed in support. The rifle platoons physically occupy the important terrain features and cover the intervals by fire. They are located to be mutually supporting and capable of all-around defense; they afford close rifle protection for the elements of the weapons platoon and for other supporting weapons in the company area.

b. Battalion reserve. (1) *Missions.* The battalion reserve usually consists of one rifle company. It may be assigned the

following missions:

(a) *Extend in depth the organized resistance of the battalion.* The reserve company usually organizes a defensive position with three platoons abreast in order to make the defense of the battalion continuous in depth. (See fig. 10.) Platoon defense areas are located within supporting distance (500 yards) of the rearward limits of front-line rifle companies. These areas should be sufficiently far to the rear (150 yards) so that they will not be included in the dispersion of fire directed at friendly units to their front. Platoons are located to be mutually supporting and capable of all-around defense.

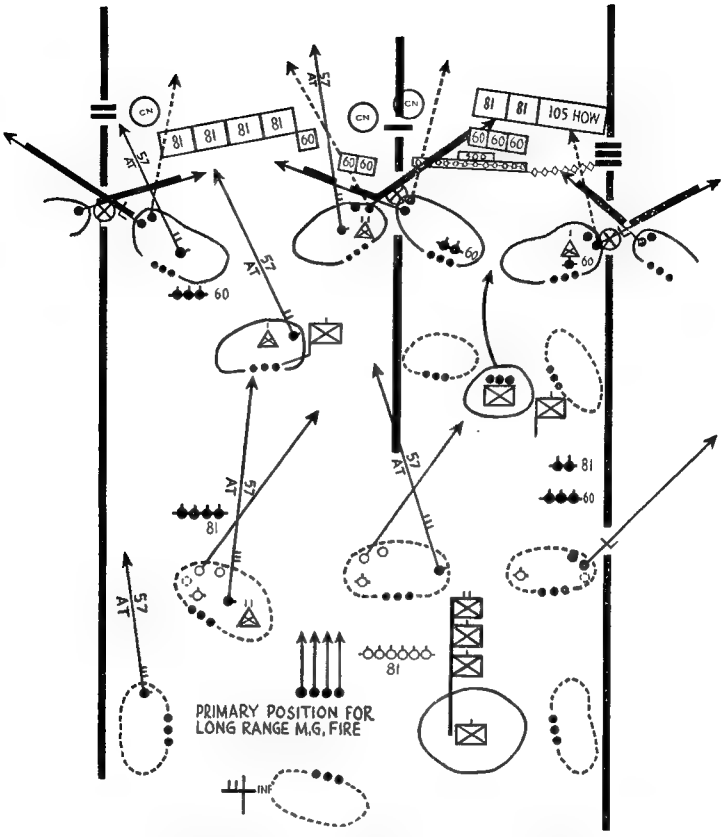

Figure 10. Organization and plan of close defensive fires of interior front-line battalion (schematic).

NOTE.—For considerations involved in locating machine guns on the MLR, see paragraph 216*a*. The distribution of troops and weapons shown above is not invariable, e.g., machine guns may be employed singly.

(b) *Protect the flanks and rear of the battalion.* In order to be prepared to block a penetration in an adjacent defense area, the reserve company organizes supplementary platoon defense areas on each flank and toward the rear of the battalion defense area. These defense areas are so located as to prevent the widening of a penetration and the envelopment of the flanks and rear of the battalion.

(c) *Counterattack.* A counterattack is launched to eject the enemy from the position when he has penetrated the defense area and his momentum has been slowed down or stopped. (See par. 225*b*.)

(d) *Establish combat outpost.* All or part of the reserve company may be detailed initially to establish a combat outpost. (See par. 223*a*.)

(e) *Assist in organization of forward areas.* Working parties may be detailed to the forward areas to assist in clearing fields of fire, installing mine fields and other obstacles, constructing emplacements and intrenchments, and executing camouflage.

(2) *Location.* After the reserve company has completed the organization of the assigned defense areas, it usually will be held mobile in a concealed and defiladed assembly area, if such exists, within the rear limits of the battalion defense area. The location of such an assembly area should facilitate the entry of the reserve into combat, provide sufficient defilade and dispersion for the protection of all elements against artillery fire, and take advantage of any natural obstacles for protection against armored attack. If no such area exists, the reserve occupies the prepared positions that extend the organized resistance of the battalion in depth. Similarly, it occupies these positions when the situation indicates the likelihood of intensive bombardment by hostile aviation or an armored attack which threatens to immobilize the reserve company.

216. DISTRIBUTION AND MISSIONS OF SUPPORTING WEAPONS. *a.* (1) The battalion order assigns general locations and missions for both the heavy and light machine guns. Usually one platoon of heavy machine guns and the

light machine guns of forward rifle companies are assigned missions in close support of the main line of resistance. If additional machine guns are required for this mission the light machine guns of the reserve company are employed in preference to the remaining heavy machine guns. Additional light machine guns, authorized by the theater of operations commander, may also be available. Locations are assigned so as to emplace the light machine guns (except those of the reserve company, if employed in close support of the main line of resistance) within the areas of their respective companies and to facilitate control of heavy machine guns by their platoon leader. These guns are assigned sectors of fire and final protective lines. Usually the machine guns in close support of the main line of resistance are sited by sections. In broken terrain or over a wide front they may be sited singly. Final protective lines are planned to present as nearly as possible a continuous interlocking band of grazing fire across the front of the battalion.

(2) The remaining heavy machine guns and the light machine guns of the reserve company (unless employed in close support of the main line of resistance) are assigned rear locations which will enable them to execute a primary mission of long-range fire in support of that line and supplementary missions for limitation of penetration, flank protection, and support of counterattacks. They may be located *initially* with the combat outpost and later withdrawn. (For antiaircraft missions for heavy machine guns, see par. 223*c*.)

(3) Unless employed in close support of the main line of resistance the light machine guns of the reserve company are assigned locations from which they can be readily released to company control in case the company is employed in counterattack.

b. The 81-mm mortars may, depending on terrain, tactical and supply considerations, be emplaced in battery by platoon, or distributed by section or squad in width and depth, and may be employed to fire by platoon, section or squad. They occupy positions in defilade within communicating distance of observation post(s) which afford view of the target area(s). They are emplaced generally in rear of the support

platoons of the front-line companies so that minor penetrations will not force displacement. They should not be located in the more likely areas of hostile penetration. Supplementary firing positions to the rear are assigned to permit continuous fire against deep penetrations within the battalion area. The battalion order assigns primary and secondary target areas for each squad, section, or platoon, depending on the contemplated employment of the weapons. Massing of the fire of the entire platoon usually calls for massing of the mortars themselves to facilitate control.

c. The primary mission of the battalion antitank platoon is to stop hostile tanks before they reach the main line of resistance. The guns are assigned firing positions from which they are able to deliver effective fire in support of the main line of resistance. As first priority, they should be emplaced defiladed in locations enabling them to cover by fire the most likely avenues of mechanized approach and deliver fire on each hostile tank before it reaches the main line of resistance. Alternate positions must be provided. Guns will be emplaced within platoon defense areas if consistent with the execution of this mission. Positions selected should enable the guns to deliver mutually supporting fires so that tanks attempting to overrun one gun will receive flanking fire from another gun. Close-in protection of antitank guns must be provided by other troops. Guns intended solely for antimechanized use are kept concealed initially and not fired until hostile tanks appear within effective range; their value may be neutralized if their location is prematurely disclosed. The guns of the antitank company, attached tanks and tank destroyers reinforce the fires of the battalion guns, add depth to the antitank defense of the forward battalions and protect their flanks. (See FM 7-35.) Tank-hunting teams should be utilized to seek out and destroy enemy tanks at every opportunity.

217. SUPPORTING ARTILLERY AND CANNON COMPANY. *a.* (1) The amount of artillery supporting the defending force is the minimum necessary for the successful execution of the defensive mission. In the case of a normal combat team operating separately from the division, one or

more battalions of artillery are ordinarily made available. Normally one battalion of light artillery is allotted to support of an infantry regiment. This battalion can fire only three normal barrages for the close defense of the main line of resistance and the regimental commander allots these barrages to the battalions occupying that line. The responsibility for locating the allotted normal barrage(s) on the ground is delegated to the infantry battalion commander.

(2) Other artillery fires which should be requested from the supporting artillery include—

(a) Fires covering avenues of approach, probable hostile assembly areas, and observation posts.

(b) Fires in support of the combat outpost.

(c) Fires within the battle position to repel or stop a hostile penetration and in support of counterattacks.

(d) Emergency barrages to supplement the normal barrages or other protective fires.

(3) When the regiment is operating as a part of the division, the supporting fires of one or more additional artillery battalions of the division may be available. At times these may be augmented by the fires of non-divisional artillery.

(4) With the assistance of the artillery liaison officer the battalion commander plans all supporting artillery fires. He coordinates them with the fires of his own weapons.

b. One platoon of the cannon company is usually placed in close support of each front-line battalion, while the remainder of the company is placed in support of the regiment as a whole. Whenever the terrain permits, howitzers are initially emplaced in concealed firing positions prepared to deliver indirect fires either by platoon or section. Cannon platoon(s) are used for long-range fires against observed targets, for fires in close support of the main line of resistance, and in support of counterattacks.

c. Chemical mortar and rocket units attached or supporting the battalion from positions in rear of the prepared positions of the battalion reserve company are assigned appropriate target areas.

218. TANKS. *a.* In the sustained defense, tanks can be used with the infantry battalion in close support of the main line of resistance and for counterattack, the support of the latter being their primary mission. The number of tanks employed depends upon the terrain, the extent of the front held, the enemy situation, and the availability of tank units. Tanks should ordinarily be employed as a unit, if the terrain is suitable. If the terrain is unsuitable for the employment in mass of an entire tank battalion, tank companies or platoons may be attached to infantry battalions or companies. The wider the frontage assigned to a front-line infantry unit in defense, the greater the need for a strong and mobile reserve. Terrain containing many natural tank obstacles may make it necessary to use tanks in small rather than large groups. The infantry battalion commander usually attaches available tanks to the reserve for counterattack. Exceptionally they may be attached to front-line companies for direct fire missions. Tanks may be assigned a secondary mission of reinforcing the fires of the field artillery. For tanks so used, ammunition must be provided and its replacement foreseen, so that the tanks when committed for counterattack will still have their organic loads of ammunition.

b. The tanks supporting the main line of resistance by direct fire initially occupy defiladed positions, from which they may readily move to hull defilade firing positions. If time is available, firing positions are prepared. These firing positions should be located on the flanks of the platoon areas, outside of the protective wire. (See fig. 11.) Each tank must have one or more alternate or supplementary firing positions. Defiladed routes to the rear for withdrawal are essential. If the enemy reaches assaulting distance the tanks can execute local counterattacks in front of the defending infantry.

c. The counterattack may be launched to eject an enemy who has succeeded in penetrating the position or to destroy the enemy while he is forming for an attack. (See fig. 12.) The principal advantage to the defender of this latter type of employment of tanks is to gain time by disorganizing and disrupting the enemy before he can coordinate and launch

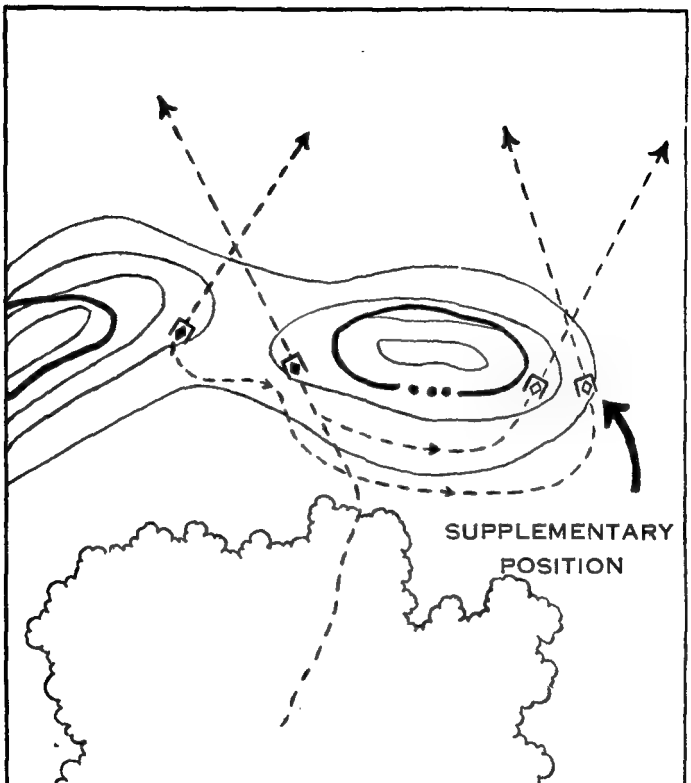

Figure 11. Direct fire position for tanks.

his attack. Tanks will make this type of counterattack alone and receive supporting fires from the infantry and artillery. [For the use of tanks in counterattack with infantry, see par. 225*b*(2).]

219. FIRE PLAN. *a.* The battalion fire plan seeks to take the enemy under fire from the time he enters the zone of surveillance of the combat outpost, hold him under an in-

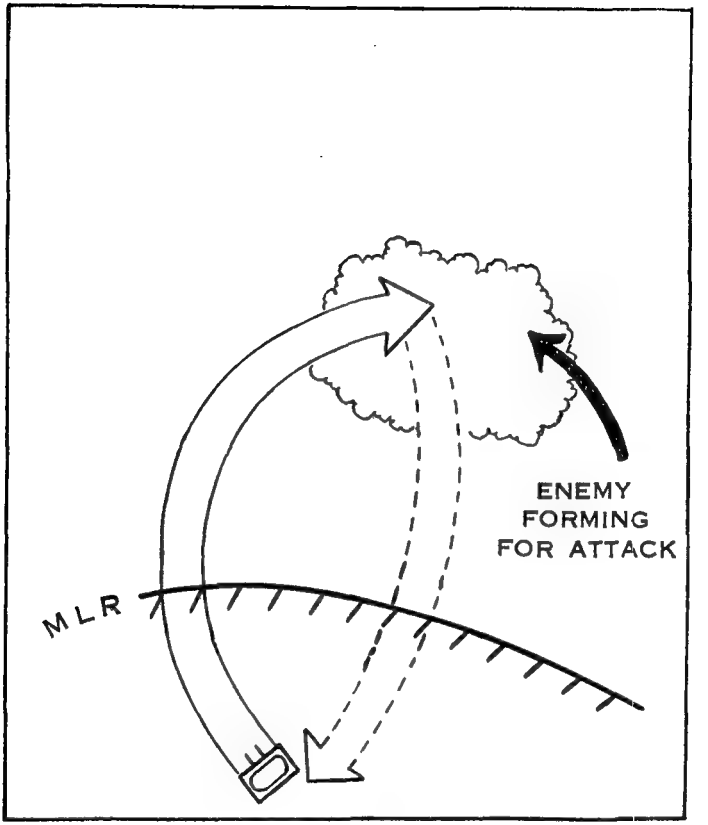

Figure 12. Counterattack by tanks to destroy enemy in assembly area.

creasingly heavy volume of fire as he approaches the battle position, stop his assault by a dense band of closely coordinated fires immediately in front of the battle position, limit his penetration of the position by prepared interior fires, and eject him from the position by a combination of prearranged fire and counterattack. (See fig. 10.) The fire plan

provides for the opening of fires, signals for close defensive fires, rates of fire, mutual support of adjacent units, and fires to be delivered under conditions of reduced visibility.

b. Long-range interdiction fires by the supporting artillery are normally a function of regimental planning, as such fires must be coordinated with the location and withdrawal of the general outpost. Long-range artillery, cannon, and mortar fires to be observed from the combat outpost line are included in the battalion plan. Such fires, and fires in close support of the combat outpost are accomplished by locating observers for these weapons with the combat outpost.

c. The withdrawal of the combat outpost is supported by prearranged artillery, tank, cannon, long-range machine-gun, and mortar fires. Machine-gun fire support may be delivered by rear guns or, if these guns are attached to the combat outpost, by guns assigned missions in close support of the main line of resistance and sited in temporary positions sufficiently in front of or in rear of the main line of resistance so that their fires will not disclose the location of that line. Upon withdrawal of the combat outpost, fires against targets of opportunity are usually opened upon the individual initiative of weapon commanders or observers. The heavy weapons commander, the artillery liaison officer, the tank commander, and the representative of the cannon company usually are with the battalion commander at the battalion observation post. Through these individuals, the battalion commander is able to concentrate on desired areas.

d. Fires from the main line of resistance ordinarily are withheld until the enemy has approached within 500 yards of the position (see FM 7-40), and the hostile attack is definitely committed. Where the foreground of the position is divided by cross compartments, with intervening areas of dead space which afford defilade to the attacker, fires from the main line of resistance may be withheld until the hostile attack has arrived at the nearest ridge line.

e. (1) Close defensive fires are planned to place a dense curtain of fire across the battalion front just in front of the main line of resistance. These fires are a combination of ma-

chine-gun final protective fires, fires on primary target areas of 81-mm and 60-mm mortars, and the barrages of the supporting artillery. Elements of the cannon company will be prepared to deliver concentrations supplementing the prearranged close defensive fires of other supporting weapons; usually they will not execute barrage missions.

(2) The battalion fire plan provides for the release of close defensive fires across the entire front or in front of any threatened locality. Each front-line rifle company is authorized to call for barrage fire. Close defensive fires which support adjacent units may also be opened upon call from either adjacent battalion. The battalion order includes all necessary provisions for calling for these fires by at least one nonvisual means of communication, and also by ground signals prescribed by the signal operation instructions of the division. It also states the localities from which such signals will be fired, those weapons which will open fire on any given signal, the rates of fire for use under conditions of reduced visibility, and the duration of fires. Only those fires should be opened which protect the area calling for them.

(3) Rates of fire usually prescribed are heavy machine guns, 250 rounds per minute for 2 minutes, and 125 rounds per minute thereafter; light machine guns, 150 rounds per minute for 2 minutes, and 75 rounds per minute thereafter; 81-mm mortar, 9 rounds per minute for 2 minutes, and 6 rounds per minute thereafter. Rates of fire for the supporting artillery and tanks will usually be prescribed by higher headquarters.

(4) Fire may be continued until the locality requesting such fire requests firing to cease, or until the time length for each fire prescribed in the battalion order has elapsed. In prescribing time lengths of fire, ammunition supply must be considered. Each fire usually should not exceed 10 minutes. If additional fire is needed, the call may be repeated. Visual signals for cessation of fire should be used sparingly and time length of fire should be varied in order that a routine of fire will not be disclosed to the enemy.

(5) While fires of the 60-mm mortars of front-line rifle companies are included in the close defensive fires of the

battalion, the battalion commander does not prescribe their locations, target areas, or rates of fire. These matters are prescribed by their respective company commanders.

(6) The 60-mm mortars of the reserve company may be emplaced to deliver close defensive fires; when these fires cannot be observed, such employment is practicable only where prior registration is possible. They may be emplaced so as to utilize firing data obtained from the observation and communication system of the 81-mm mortars. When so employed, these mortars should be so located as to permit their release to the reserve company upon its commitment to action.

f. Fires within the position to limit penetrations and support counterattacks by the reserve company are planned for all supporting weapons.

g. The battalion commander prescribes the conditions under which the battalion antitank guns open fire. His defense order should assign not more than one gun to fire on hostile vehicles or tanks apparently engaged in reconnaissance. *Fire of other antitank guns should be withheld until the hostile tank attack has been definitely committed.* Terrain features usually are designated which armored vehicles are to cross (or pass) before antitank guns open fire; different terrain features may be prescribed for different types of armored vehicles. These designated features should place the hostile vehicles in such position that there is a reasonable expectation of obtaining effective hits; 57-mm guns should not open fire at ranges greater than 800 yards. Attached tanks and tank destroyers may be employed to augment the antitank fires of the battalion.

220. ORGANIZATION OF GROUND. Immediately upon the occupation of a position, steps are taken to strengthen the defenses by clearing fields of fire and by the construction of individual shelters, emplacements for weapons and attached tanks, and obstacles. Measures for concealment and camouflage are carried out concurrently with construction tasks. The sequence in which these various tasks are to be accomplished is expressed in orders in the form of priorities.

a. Planning and supervision. (1) The battalion commander's plan for the organization of ground should prepare the battalion for combat in the shortest practicable time. Tools and materials are allotted in accordance with the amount and urgency of the work to be done by the various subordinate units. The battalion commander and his staff supervise the work to insure that the terrain is used to the best advantage, that concealment and camouflage measures are carried out, and that the work on the position progresses without loss of time or wasted effort.

(2) If the defense area must be occupied under hostile artillery fire or air attack, concealed positions may initially be selected and occupied, and organization of exposed positions either postponed until dark or accomplished piecemeal by the infiltration of small groups.

b. Priorities. (1) The normal order of priority of work is indicated below; depending on the situation some or all of these tasks are carried out concurrently.

(a) Clearing fields of fire.

(b) Laying of antitank mine fields and antipersonnel mines.

(c) Providing adequate signal communication and observation systems.

(d) Preparing emplacements for weapons and individual shelter.

(e) Preparing obstacles (other than mine fields).

(f) Preparing routes for movement of reserves, attached tanks, and for supply and evacuation.

(2) *Priorities for front-line companies.* So far as possible, front-line companies are assigned no initial tasks other than the organization of their defense areas. Clearing of the necessary fields of fire, emplacement of their crew-served weapons, and digging of individual shelters receive first priority.

(3) *Priorities for heavy weapons company.* First considerations for the heavy weapons company include clearing fields of fire, emplacement of weapons, establishment of observation and communication, and digging individual shelters.

(4) *Priorities for the reserve company.* Elements of the reserve company not assigned to security missions may initially be ordered to assist the front-line companies in the organization of the ground. Such tasks may include laying of mine fields, preparation of obstacles, and assisting in the clearing of fields of fire. When the reserve company is to prepare flank positions in the battalion reserve area, the priority of the organization of such positions is stated in orders. Work on these positions may be postponed until the organization of the forward areas is well under way.

c. Tasks for the battalion headquarters company. The installation of the signal communication and observation systems, and preparation of routes within the position are normal tasks for the elements of the battalion headquarters company.

d. Missions for engineers. Engineers will usually be assigned special construction missions by higher headquarters. When made available to the battalion, they can best be employed to construct obstacles and other works requiring special equipment and specialized training, and to execute demolitions.

e. Construction and location of works. For detailed information on types and methods of construction of various field works, see FMs 5-15, 7-10, 7-15, and 7-35. All works are located to take advantage of natural concealment so far as their tactical use permits. Where concealment cannot be obtained they are camouflaged. (See FM 5-20.)

f. Obstacles. (1) Tactical obstacles are located to stop or divert the hostile approach. Barbed wire entanglements, antipersonnel mines, antitank mines, and other obstacles are placed, or natural obstacles are improved, to break up the enemy's attack formations and hold him in areas which are covered by intense defensive fires, particularly those of automatic weapons and antitank guns. They are so placed that their removal or neutralization by the enemy can be prevented by rifle or machine-gun fire and where they will be inconspicuous both from the ground and from the air. (See FMs 5-15 and 5-30.)

(2) Protective obstacles, such as barbed wire, trip flares, booby traps, and antipersonnel mines, are so located as to prevent the enemy from delivering a surprise assault from positions close to defense areas. Such obstacles should be near enough to defense areas for adequate surveillance by day and night and far enough away to prevent the enemy from lying beyond the obstacles and effectively employing hand grenades. Additional obstacles are installed close to defense areas when needed.

g. Individual shelter and emplacements. Personnel dig one or two-man foxholes. Suitable undercutting of foxholes to create a niche in the bottom part will add protection from artillery time fire. Primary, alternate, and supplementary emplacements are dug for the all-around protection of each defense area. Whenever possible, natural cover, drainage lines, ditches, and other defilade are used for movement within the defense areas. When such defilade is insufficient to permit covered movement of machine guns and 60-mm mortars from their primary to their alternate or supplementary emplacements, or movement of other weapons and personnel in the defense area, shallow connecting trenches are dug as needed, provided disclosure of the position will not result, or when the value of such trenches in control, communication, and supply outweigh the possible sacrifice of concealment. They should be dug, where practicable, in areas (under the limbs and foliage of trees and bushes) concealed from air observation; if this is impracticable they should be extended at least 100 yards beyond each emplacement.

h. Dummy works. When time permits their construction, dummy works may be used to mislead the enemy and disperse his fire. To be effective, they must closely resemble genuine works; dummy works easily recognizable as such give the enemy valuable negative information. They must appear realistic. They should be located at least 150 yards from any true position so that fire directed at them will not include occupied localities. Further to deceive the enemy, dummy works may be manned with small groups during preliminary phases when the enemy is seeking to locate defensive works by active air reconnaissance and ground patrolling.

221. ORDERS. *a.* If practicable, the battalion commander issues a complete oral defense order to his subordinate commanders and staff. However, if such procedure will delay the occupation and organization of the position, fragmentary orders are issued. The commander of the heavy weapons company should have sufficient information to place his company in position by the time he has completed the reconnaissance with the battalion commander. Other commanders are given sufficient details of the battalion plan to place their troops on the position and commence its organization. Complete details of the defense plan are transmitted later.

b. The following outline indicates the matter, when appropriate, to be included in the battalion order:

BATTALION DEFENSE ORDER

1. *a.* Information of the enemy.
   b. Information of friendly troops.
      (1) Situation and mission(s) of the regiment and adjacent units.
      (2) Supporting fires of artillery, cannon, antitank, tank, tank destroyer, chemical mortar, rocket, and aviation units.
      (3) Covering forces and other security elements in vicinity.
2. Battalion general plan of defense.
   a. Boundaries of defense area.
   b. General course of main line of resistance.
   c. Limiting points.
   d. Distribution of rifle companies.
   e. Formation of rifle companies.
3. Instructions to subordinate units.
   a. Specific instructions to each rifle company on main line of resistance.
      (1) Boundaries and limiting points.
      (2) Security mission(s).
      (3) Conditions or restrictions on opening fire.
   b. Specific instructions to the heavy weapons company.

(1) Missions and distribution of machine guns, both heavy and light.
(2) General firing positions and missions for 81-mm mortars; primary target areas and areas for the massing of fires.
(3) Conditions or restrictions on opening fire.

c. Instructions to the antitank platoon and attached tank destroyers.
(1) Firing position area(s).
(2) Sector of responsibility and principal direction of fire.
(3) Conditions for and restrictions on opening fire.
(4) Special instructions concerning coordination with other antitank units.
(5) Location of mine fields and obstacles.

d. Instructions to the reserve (counterattacking force).
(1) Composition.
(2) Mission(s).
(3) Location.
(4) Priority for planning counterattacks against assumed penetrations.

e. Instructions to attached tank units.
(1) Mission(s) (direct fire support or reinforcing artillery fires, and supporting counterattacking force).
(2) Position(s) to be occupied.
(3) Route(s) to attack position(s).
(4) Conditions or restrictions on opening fire.
(5) Location of mine fields and obstacles.

f. Instructions to attached chemical mortar and rocket units.
(1) General firing positions and missions.
(2) Primary target areas and areas for the massing of fires.

x. Instructions applicable to more than one unit of the command.
(1) Alterations or additions to standing operating procedure.

(2) Organization of the ground, to include priorities.
(3) Composition, location, and mission of the combat outpost.

4. Administrative instructions and information.
   a. Ammunition supply.
      (1) Location of battalion ammunition supply point.
      (2) Arrangements for distribution of ammunition, including amount to be placed on position.
      (3) Alterations or additions to standing operating procedure for ammunition supply.
   b. Instructions relative to company transport and battalion train.
   c. Location of battalion aid station.
   d. Instructions for feeding.
5. Communication instructions.
   a. Index to signal operations instructions in effect.
   b. Restrictions, if any, on use of radio.
   c. Special pyrotechnic signals.
   d. Location and times of opening of battalion and company command posts.
   e. Alternate locations of battalion command post.

222. CONTROL OF MOTOR VEHICLES. Upon occupation of the position, company and ammunition train vehicles are unloaded in covered and concealed locations as close as practicable to localities where their loads are to be used. (See FMs 7-10, 7-15, 7-35, and 7-37.) As soon as the position has been supplied, all vehicles except prime movers of antitank guns, and those necessary for command and communication are withdrawn to the rear and held under battalion or regimental control, usually in the vicinity of the regimental train bivouac. Replenishment of ammunition on the positions will usually be effected under cover of darkness. Movement of vehicles at night is made without lights. Supply vehicles are returned to the rear area prior to daylight.

223. SECURITY. Covering forces of higher units usually provide *distant* security for front-line battalions during the

initial phases of a defensive operation. These covering forces may include armored and motorized forces under army, corps, or division control, and a general outpost under division or regimental control. (See FMs 7-40 and 100-5.)

a. Combat outpost. (1) When the general outpost is at a considerable distance from the main line of resistance or when the enemy situation prevents the establishment of a general outpost, a battalion occupying an area on the main line of resistance provides for its *local* security by establishing a combat outpost. It is established as soon as the battalion starts to occupy the battle position.

(2) The regimental commander will usually designate the approximate location of the combat outpost line between 800 and 2,000 yards forward of the main line of resistance. It is so located as to provide observation over the terrain to the front, deny enemy observation of the battle position, and prevent observed hostile fire against the battle position.

(3) The combat outpost for front-line battalions will vary in size from a rifle platoon to a rifle company, reinforced with machine guns, mortars, antitank guns, tanks, and cannon company weapons. It will usually be disposed in one echelon, as a series of outguards varying in strength from a half-squad to a rifle platoon. These outguards organize defense areas on positions affording observation and long fields of fire, and provide close rifle protection to supporting weapons. The combat outpost for the regimental sector may be furnished by the reserve battalion, or front line battalions may be ordered to establish the combat outpost. If the combat outpost line is close to the battle positions, the battalion commander may order front-line companies to outpost their respective fronts. As long as the general outpost is in position, the combat outpost consists chiefly of observers and small patrols who keep the terrain to the front of the position under observation. When there are no friendly troops to the front, the combat outpost maintains contact with the enemy by patrolling, disorganizes and delays the hostile advance by opening fire at long range, and seeks to deceive the enemy as to where the principal resistance will be encountered; it is essential that contact be maintained between the outposts

and the main line of resistance. When the combat outpost is close to the battle position, withdrawal will be made directly to a designated assembly area within the battle position. However, if the mission requires that the enemy be delayed for a considerable period, for example, in order that the organization of the battle position may be completed, the withdrawal may be made on successive delaying positions. In this case a support echelon is employed. Continuous resistance is thus presented to the enemy's advance. If a strong combat outpost is required, and the position affords good fields of fire and covered routes of withdrawal, battalion supporting weapons and elements of the cannon company may be attached. (For details of their employment, see FMs 7-15, 7-35, and 7-37.) Artillery support will usually be obtained from artillery within the battle position through the placing of artillery forward observers with the combat outpost. When battle is interrupted by nightfall, combat outposts, if still in position, should be increased in strength to push patrols forward in close contact with the enemy; if they are not in position, they should be posted by dark.

(4) Communication may be maintained with and within the combat outpost by wire, radio, messenger, and visual signaling, and by patrols at night.

(5) Wide latitude is given to the combat outpost commander in conduct of the action. The combat outpost withdraws either upon the initiative of its commander or upon order of the battalion commander, using predetermined routes toward either flank so as not to interfere with fires of units on the battle position. Subordinate units and adjacent battalions are immediately notified of the initiation of the withdrawal, and front-line units are notified when all elements of the combat outpost have cleared the main line of resistance.

(6) Tanks constitute a strong mobile striking force which can be used to aid the infantry in accomplishing an outpost mission. Tanks may be attached to a combat outpost to assist by direct and indirect fire, by a quick direct thrust into the advancing enemy, or by a surprise flank attack across the route by which such a hostile force is advancing. Such attacks

must be strongly supported by machine guns, mortars, and artillery.

(7) When the main line of resistance of the battle position is on the reverse slope, security detachments strong in automatic weapons, and with rifle protection, occupy positions forward of the topographical crest covered by wire and mines, to force the attacker to fight his way up the forward slope. At night the bulk of the force occupies the forward slope.

b. Flank security. (1) Information of the situation in adjacent sectors is essential. This information is obtained by observers who keep the flanks under constant observation, and from liaison personnel. Lateral wire communication (from left to right) is established between battalions. (See FM 7-40.)

(2) Exposed flanks may be secured by patrols and by detached posts located to block the principal approaches. Use is made of demolitions and obstacles in accordance with directives from higher headquarters.

c. Antiaircraft security. (1) Security against aircraft is obtained by the protective measures of warning, concealment, dispersion, intrenchment, and fire.

(2) The warning system is fully organized in a defensive situation and is part of any aircraft warning service organized by higher headquarters; the battalion S-2 is responsible for the establishment and supervision of the warning system of the battalion. Air observers are placed within the battalion area and in the area of the combat outpost to give warning to all troops within hearing by sounding a prearranged signal by whistle, bugle, or other device. (See par. 70.) Warnings received by radio or wire are immediately relayed to the troops and higher headquarters. The air warning system includes an "all clear" signal which is sounded promptly when airplanes have passed so that the troops may resume their normal activities.

(3) Measures taken for concealment aim to defeat both visual reconnaissance and air photography. Foxholes, emplacements, and obstacles are carefully sited to utilize con-

cealment afforded by nearby banks, buildings, brush, hedges, ditches, and cuts. Earth spoil from foxholes and other ground works must be camouflaged or removed concurrently with digging to avoid disclosure of the position to air observers or by aerial photographs. Wheel and foot tracks must be concealed, obliterated, or extended beyond the installation to which they lead. White articles such as maps and clothing carelessly exposed to air observation may disclose the location of a unit otherwise concealed. At night, blackout affords effective concealment.

(4) For a description of antiaircraft defense, see paragraph 73. Weapons on or near the main line of resistance will *not* fire at hostile aircraft unless it is obvious that the location of that line is known to the enemy. Such weapons may be located initially in supplementary positions to permit them to fire antiaircraft missions. (See FMs 7-10 and 7-15.) Weapons of reserve units conform to this doctrine. At night, it is normal for supporting antiaircraft units only to fire at hostile aircraft to avoid outlining the entire position.

(5) When both air and ground targets exist, rifles, automatic rifles, and heavy machine guns are employed against whichever target appears to offer the greatest threat to the accomplishment of the mission of the unit to which the weapon belongs.

d. Antimechanized defense. (1) Measures for antimechanized defense are developed concurrently with other defensive measures. They consist of a coordinated combination of obstacles, both natural and artificial, and the fire of antitank guns, antitank grenade launchers, and rocket launchers. Natural obstacles are strengthened. Artificial obstacles are constructed; these consist primarily of such antitank traps or ditches as can quickly be dug. Antitank mine fields are laid to deny an area or to canalize the hostile tank approach into areas more effectively covered by antitank gun fire. However, some antitank weapons should be sited to cover the mine fields and obstacles in order to destroy hostile armored vehicles disabled or slowed down by them.

(2) All combat troops should be proficient in the con-

struction of antimechanized obstacles and in the technique of planting mines. Minefields should be covered by fire to prevent enemy attempts to remove the mines. Any antitank mine fields laid by the battalion are reported to the regimental commander; the regimental antitank mine platoon then records their location and marks the field. Dummy mine fields are marked similarly. The battalion maintains a traffic guard over mine fields laid in the battalion area in order to protect friendly troops against accidental detonation.

(3) During a hostile tank attack, riflemen and machine guns will fire at vision slits of tanks and at exposed personnel, particularly accompanying infantry. Personnel armed with antitank rocket and grenade launchers employ them within effective range. Fire is continued until defenders are forced to take cover to avoid the crushing action of tanks. They return to their firing positions as soon as the tanks have passed, and continue their fire on these vehicles or on other approaching tanks or accompanying infantry.

224. NIGHT DISPOSITIONS. *a.* The defender must be prepared at night or under other conditions of reduced visibility to repel a hostile attack or prevent small groups from infiltrating into the position. Consideration should be given to moving machine guns and mortars whose positions have been disclosed by daylight firing to alternate or supplementary night positions where this can be done without disrupting the system of close defensive fires. Attached tanks and tank destroyers may be moved at night into prepared enclosures inside the protective wire of the infantry units nearest to the tank emplacements, or they may be moved to rear areas.

b. (1) Defense at night depends upon prearranged fires, fires with artificial illumination, and hand-to-hand combat. Early information of hostile movement is essential. Listening posts are established to cover trails or other avenues of approach to the defense area from all directions. Patrols, moving stealthily, cover the front and the intervals between units. Where necessary, readjustments are made in the forward areas to fill gaps that would be covered by fire during

daylight. Elements of support platoons may be used to fill such gaps, or front-line platoons may be extended to the flanks. If practicable, supplementary positions are dug and camouflaged. Elements of the battalion reserve may be placed to protect an exposed flank. When the main line of resistance is located on the reverse slope in order to escape the annihilating effect of enemy fire, the bulk of the force should occupy forward slope positions at night.

(2) An attacking force that succeeds in gaining a foothold within the position during the night can best be ejected by a counterattack launched by the reserve during the halflight of early dawn before the hostile force has had an opportunity to observe its areas and surroundings and plan its defense. Patrols locate the hostile position during the night. As soon as it is sufficiently light to see, patrols search possible hideouts to mop up hostile groups which may have been overlooked during the counterattack.

c. Fog and smoke create conditions similar to night. The battalion commander decides to what extent night dispositions will be adopted.

225. CONDUCT OF THE DEFENSE. *a. General.* (1) The integrity of the battalion defense area is maintained by a combination of fire, hand-to-hand combat, and counterattack. Fires are released in accordance with the battalion fire plan. (See par. 219.) The attacker is held under an increasing volume of fire as he approaches the position. As he closes with the position, machine guns are switched to their final protective lines; close defensive artillery and primary mortar fires are laid down on call from front-line company or by battalion commanders through observers or by prearranged signal. The hostile assault is met by rifle fire and the fire of supporting weapons, grenades, the bayonet, and other forms of hand-to-hand combat.

(2) The success of the defense depends upon the holding of its assigned area by each unit down to and including the rifle squad. Each unit entrusted with the defense of a tactical locality must defend it to the last man, unless otherwise ordered by higher authority. Local commanders take the

necessary steps to maintain their positions, rectifying gaps in their dispositions or fires by the use of their supports. Troops must be impressed with the fact that hostile groups will work to their rear; that consequently they must be prepared to fight in any direction; and that successful holding of their positions forms the basis for successful counterattacks by supports and reserves to their rear. (See FM 100-5.)

(3) If the enemy succeeds in making a penetration and is still advancing so as to threaten vital terrain of the battalion, and fire alone has failed to eject him, the defender, by using the rear machine guns and fire of adjacent units, slows or stops the hostile advance. The attached tanks, tank destroyers, assault guns, chemical mortars, and the 81-mm mortars of the reserve battalion may be used to aid in this mission. (See fig. 13.)

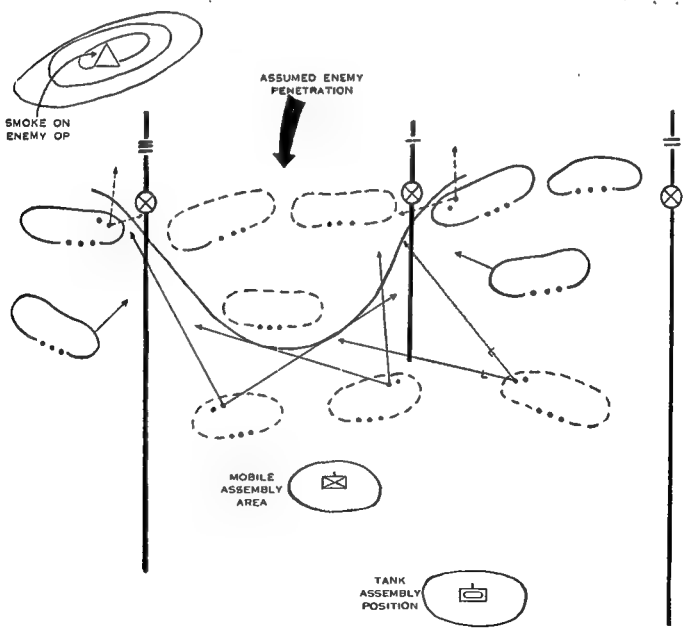

Figure 13. Fire from supporting weapons limits enemy penetration.

b. Counterattack. (1) *Infantry action.* (a) Should the enemy succeed in penetrating the battalion defense area, the battalion commander first seeks through fire to cause the immediate destruction or withdrawal of the hostile force. If fire alone is not successful, the battalion commander must decide whether to counterattack, to have the reserve hold its prepared positions to block the penetration, or to order a combination of those actions. The mission of the counterattack is to reestablish the main line of resistance, and it is usually directed against the shoulder of the enemy penetration. Unless adequately supported by armor, a counterattack is withheld so long as enemy armored elements dominate the area in which the counterattack is to be made.

(b) The battalion reserve does not counterattack against an objective outside the battalion defense area except on regimental order. However, the route to the location from which the counterattack is to be made may cross into an adjacent battalion area if such maneuver has been coordinated with the commander of that area. When the enemy is ejected from the battalion defense area, he is not pursued beyond close supporting distance of the main line of resistance, but is engaged thereafter by fire alone. The counterattack is supported by all available supporting weapons. The battalion order lists the possible penetrations against which counterattacks are to be planned, and states the priority in which the plans will be prepared. The reserve company commander prepares the details of the plans and submits them to the battalion commander for his approval and for the coordination of supporting fires.

(c) When the reserve counterattacks, a new reserve is constituted from whatever troops are available. The regimental commander is notified immediately when the decision to commit the reserve has been made.

(2) *Infantry and tanks.* (a) The primary mission of tanks in the defense is the delivering of the counterattack to eject the enemy from the battle position. This counterattack utilizes the chief characteristics of tank action, namely, high mobility, armor-protected fire power, and shock action. Conditions favorable for the combined action of the

infantry-tank team are frequently present in the counterattack. [See (1) above.] If a penetration is made by hostile tanks alone, the infantry commander must rely on his emplaced organic antitank weapons and tank destroyers, while other tank destroyers move to previously reconnoitered positions to engage the hostile tanks. (See FM 18-5.) If tank destroyers are not present, tanks may be employed from defiladed positions for direct fire on the attacking tanks. The infantry battalion commander consults with the tank commander in preparing a coordinated fire plan, which is rehearsed with troops, time permitting, by the infantry reserve. Artillery and tank representatives, including the commanders of individual tanks, should be present at the rehearsal.

(b) While the infantry battalion reserve and the tanks are moving up to the line of departure, prearranged fires are delivered into the penetration by all available weapons. (See fig. 14.) The tanks and the infantry battalion reserve will move forward from assembly areas to the attack position and line of departure along previously selected routes. Concealment to effect surprise is essential in selecting these routes. (See fig. 15.) The tanks should not pass through the organized defense areas of the defending infantry, but through the gaps between them. The attack position of the tanks and the line of departure for the infantry battalion reserve should be close together. The counterattack should be launched against the shoulder of the penetration. It should be launched quickly to strike before the hostile penetrating force has time to reorganize. Plans must provide for the lifting and shifting of fires. As the counterattacking force leaves the line of departure, a barrier of fire must be placed across the base of the penetration to neutralize any hostile fire from that area and to prevent reinforcement. Smoke may be used to deny observation to the enemy during the counterattack. As the tanks move into the hostile area, the artillery uses time fire to neutralize enemy antitank weapons. Tanks are assigned definite objectives, which they capture by fire and maneuver. They must neutralize hostile small-arms fire. Close coordination between the infantry and tanks is essen-

tial; communication between the two must be established and maintained. If light tanks are available, they may be used to protect the flank of the counterattack toward the enemy or to follow the infantry and aid in the mopping-up of isolated enemy groups. The tanks should remain in the vicinity of the restored main line of resistance until the machine guns and antitank guns from rear areas can replace those guns which have been lost by forward elements. The tanks or tank destroyers from hull-defilade positions must defend the infantry from an enemy tank attack during this phase. When the infantry has reoccupied the penetrated area, the tanks withdraw to their rallying point behind the friendly front line and thence to their assembly position.

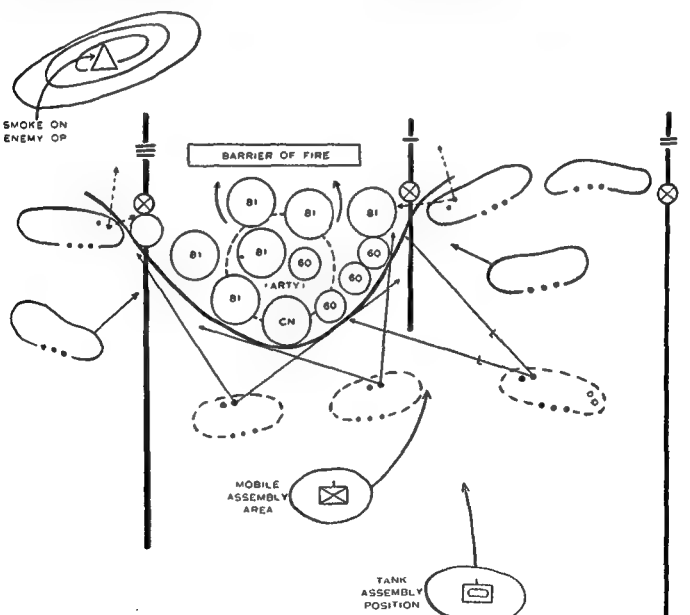

Figure 14. Prearranged fires into penetration.

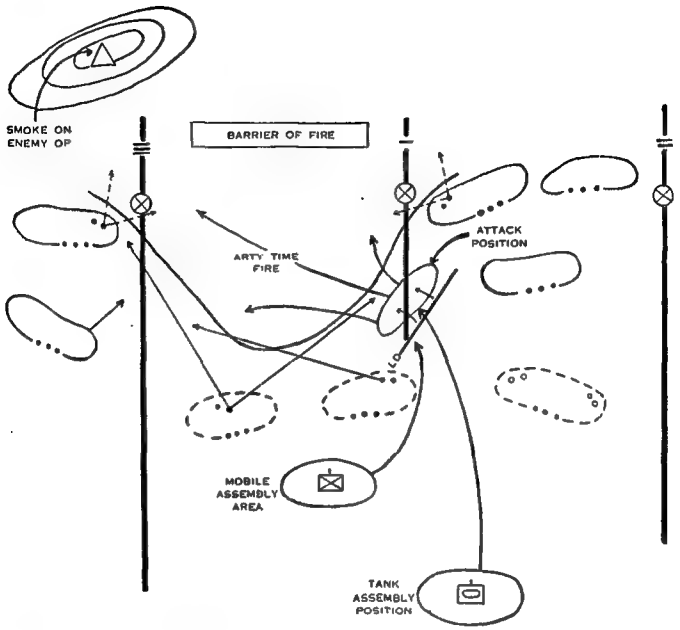

Figure 15. Counterattack plan of maneuver.

c. Penetrations in adjacent areas. Penetrations in adjacent areas are opposed by committing all or part of the reserve to flank positions in order to prevent the widening of the penetration and the envelopment of the battalion flank.

d. Closing gaps. Gaps created in the main line of resistance by armored attack must be closed promptly by the movement of infantry supports or reserves as soon as the armor leaves the area. Tanks should not be withdrawn until notified by the infantry commander that the position has been consolidated.

e. Defense against infiltration. Constant vigilance is maintained against small groups infiltrating into the battalion area. During daylight, observers are posted within each subordinate defense area to keep the ground between defense

areas under constant surveillance; areas that cannot be observed are searched by roving combat patrols. (For dispositions at night or under conditions of reduced visibility, see par. 224.)

226. RELIEF. *a.* The relief of a battalion on the battle position is preceded by a detailed reconnaissance of the area by officers of the relieving unit. If time permits, all commanders down to and including platoon leaders visit the position prior to execution of the relief. Company officers familiarize themselves not only with the disposition of the defending force, but also with the known hostile dispositions on their part of the front. Arrangements are completed for the transfer of supplies and special equipment to be left on the position by the battalion being relieved. Usually the battalion being relieved takes with it only the ammunition prescribed in the relief order, together with all individual and organizational equipment. Special equipment and ammunition stores are left. The commander of each relieving unit assures himself that the arms, clothing, and equipment of his men are in proper condition and that each man has the prescribed ammunition, reserve rations, and equipment. Sufficient guides are detailed from the relieved unit to meet each platoon of the relieving battalion and conduct it to its position.

b. The commander of the relieving battalion should acquaint himself with the artillery fire plan for the support of the battalion being relieved and, in planning his own defense, should request that any necessary changes be made.

c. Secrecy in planning and conducting the relief is essential. The relief should be accomplished during darkness and in time to permit the relieved unit to be beyond artillery range prior to daylight. Incoming leaders inspect the position of each subordinate element as soon as occupation is completed to insure their readiness for defensive action. The commander of the relieving battalion reports to his regimental commander as soon as the battalion is in position.

d. The execution of the relief takes place under direction of the battalion commander being relieved; he remains in

command of his battalion area until the relief has been completed; in event of hostile attack during the relief, he conducts the defense, and the incoming battalion commander cooperates with all the means available.

Section III

RESERVE BATTALION

227. MISSIONS DURING ORGANIZATION OF REGIMENTAL SECTOR. *a.* Initially the regimental commander may employ the reserve battalion, in whole or in part, on security missions, to assist the front-line battalions (holding garrison) in the organization of their areas, or to execute other construction tasks. (See FM 7-40.) Construction tasks may include clearing fields of fire, developing natural obstacles, laying mine fields, clearing routes for its own movement and for supply and evacuation, and construction of dummy works.

b. Positions to deepen the defense, block penetrations from the flanks, and provide all-around protection are designated for organization by the reserve battalion in the regimental defense order. (See fig. 16.) The first positions reconnoitered and prepared are those from which the reserve can best protect the flanks and rear of the front-line battalions and from which it can block the most probable penetrations of the regimental sector.

c. The battalion executes its construction tasks and prepares its positions in accordance with priorities expressed in the regimental defense order.

228. INITIAL MISSIONS FOR THE HEAVY WEAPONS COMPANY. The regimental order usually assigns to the heavy machine guns and 81-mm mortars of the reserve battalion initial locations and missions for long-range fires in support of the main line of resistance. These weapons, protected where necessary by small rifle detachments, will usually be located in the rear areas of the front-line battalions. Upon commitment of the reserve battalion these

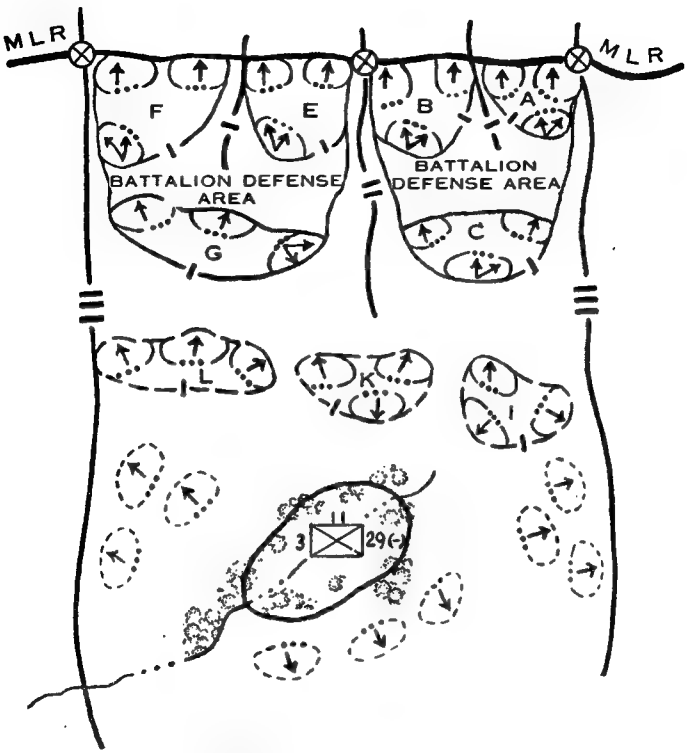

Figure 16. Organization of interior regimental battle position (schematic).

NOTES

1. Within each platoon defense area, arrow points in principal direction of fire.

2. Positions organized by the regimental reserve to block penetrations from the flank(s) and to deepen the defense are indicated by broken lines.

3. Where the situation indicates the likelihood of intensive bombardment by hostile combat aviation, or armored attack, the regimental reserve occupies prepared defense areas to—

a. Support forward battalions by the fire of its heavy weapons.

b. Defend in place, extending in depth the organized resistance of the regiment.

c. Reassemble and move to counterattack when bombardment, the threat of bombardment, or armored attack is past.

4. Where the situation indicates attack by infantry supported by artillery, the heavy weapons of the regimental reserve, protected by small rifle detachments, are emplaced for the execution of prepared defensive fires. That part of the reserve not so engaged is held in a concealed, defiladed area, prepared to occupy its selected defense areas or move to counterattack. (See FM 7-40.)

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weapons are released to it. (For subsequent fire missions, see FM 7-15.)

229. ASSEMBLY AREA FOR THE RESERVE. Where the terrain within the area of the reserve affords a concealed, defiladed position which is readily accessible to the defense areas and to areas from which to counterattack, and which is of sufficient size to permit the necessary dispersion of troops, it may be assigned as an assembly area for occupancy by the reserve (less heavy weapons emplaced for long-range fires). For conditions governing its use, see paragraph 231. The regimental order will designate its location, and also the assembly position for attached tanks and tank destroyers. The assembly area should be protected by natural obstacles. Mine fields are laid and antitank obstacles constructed as time permits.

230. COUNTERATTACK PLANS. *a.* The regimental order announces the assumed penetrations against which counterattack plans will be prepared. The commander of the reserve battalion prepares the plans, effects the necessary coordination with supporting units, and submits the plans to the regimental commander for approval.

b. Unless specifically ordered by higher authority the counterattack is not directed against an objective outside the regimental sector. However, adjacent commanders collaborate in plans to eject penetrations which compromise the integrity of both areas, and the higher commander is informed of such plans.

c. A counterattack plan includes the route to the line of departure; the line of departure; formation; direction of counterattack; objective; initial missions for heavy weapons, cannon company, and artillery, together with time or signal to lift fires and subsequent fire missions; and tank support, if provided. (For counterattack with tanks, see FMs 7-40 and 17-36.) If the route to the location from which the counterattack is to be made crosses into the sector of an adjacent regiment, the movement is coordinated with its commander.

d. Subordinate commanders are fully acquainted with counterattack plans. They are given opportunity to reconnoiter the ground and familiarize their troops with the details of execution. If practicable, counterattacks are rehearsed.

e. Each counterattack is planned to strike a single fully coordinated blow, supported by all available fires, to regain a lost portion of the main line of resistance. It is usually directed against the shoulder of the penetration. [See also par. 225*b*(1).] Little or no reserve is held out. Artillery and mortar fires may be used to soften up the penetration or to prevent the entrance of additional hostile troops into the penetrated area. If the route of advance of the counterattacking force is exposed, smoke is freely used to blind the hostile observation. Usually the cannon company will be placed in close support of the battalion for its counterattack. The antitank platoon is employed as in an attack.

f. If the counterattack succeeds in driving out the penetrating forces they are pursued by fire. The battalion then occupies the recaptured area and organizes its position as for defense of the main line of resistance. New reserves are created from units displaced from their original positions by the penetration and counterattack. If the counterattack is stopped short of its objective, units dig in and hold the areas they occupy. When the reserve counterattacks, a new reserve is constituted from whatever troops are available.

g. (1) In general, the planning involved in using the reserve battalion and attached tanks in a joint counterattack is the same as that outlined for the battalion reserve company. [See par. 225*b*(2).]

(2) The heavy weapons company of the reserve battalion, adjacent infantry, artillery, tank destroyers, chemical mortars and rocket units, slow down or stop the enemy attack. Elements of the attached tanks may aid in this mission. While the counterattacking force is moving to the line of departure, the fires of the artillery, cannon company, assault guns, and all available mortars are delivered into the penetration. The tanks form the attacking echelon. The second echelon may be composed of either infantry, or tanks and infantry. The light tank company may be used to protect the flanks or aid the infantry in mopping-up. While the infantry is reorganizing and restoring the main line of resistance, tank destroyer units may be moved forward to aid in antitank defense. Unless strongly supported by suitable tanks, tank destroyers and antitank weapons, the reserve does not counterattack while strong enemy mechanized forces remain in the area of the planned counterattack.

231. MISSIONS OF THE RESERVE DURING COMBAT. *a.* When the situation indicates the likelihood of intensive bombardment by hostile combat aviation or attack by armored forces which initially might immobilize the regimental reserve, the latter is directed by the regimental commander to occupy selected defense areas that it has previously organized. From these positions it is prepared to support front-line battalions by the fires of its heavy weapons, defend in place, or reassemble and move to the counterattack or to flank or rear positions for all-around defense.

b. (1) Where the situation indicates attack by infantry supported by artillery, heavy weapons are emplaced for the execution of the initial missions prescribed by the regiment. If an assembly area has been designated, that part of the reserve not so employed is directed by the regimental commander to occupy it, prepared to move to selected defense areas or counterattack. Otherwise, it occupies defense areas designated by the regimental commander.

(2) When the reserve occupies an assembly area, units are dispersed and individuals dig foxholes for protection against air and tank attacks. The battalion antitank platoon

is disposed to protect the assembly area. Cannon company howitzers may also be employed.

c. In either case given above, plans are formulated against attempted landings from the air. (See section V.) Air-antitank guards are assigned. Small combat groups and security patrols are employed for protection against enemy infiltration, particularly at night. The regimental order defines the area of responsibility for such action.

232. CONTROL OF MOTOR TRANSPORT. If the contemplated movement of the battalion justifies their use and adequate defilade exists, sufficient company vehicles may be retained with the battalion to move weapons and ammunition. Prime movers for antitank guns are retained under platoon control.

233. ACTIONS OF RESERVE COMMANDER DURING COMBAT. When the enemy launches his attack, the commander of the reserve battalion keeps himself informed of the situation by personal reconnaissance and by the use of observers and officers detailed to effect liaison. He must be in constant touch with his command post and with the regimental commander. He usually remains with the regimental commander at the regimental observation post until his battalion is committed to action.

Section IV

SPECIAL OPERATIONS

234. DEFENSE ON A WIDE FRONT. *a.* When the battalion is assigned a frontage of such width that mutual support between front-line units would be impracticable if one defensive position were organized in the normal manner, flexibility in defense is essential. Plans must be prearranged so that the battalion can shift its defensive weight rapidly to meet the main attack of the enemy as it develops, and constitute an island of resistance capable of all-around defense. If time permits, several battalion defense areas are prepared.

b. The frontage of the battalion is normally divided be-

tween two rifle companies, each of which covers its frontage with a series of outguards and holds the bulk of its strength mobile in a concealed assembly area. The reserve company is similarly held mobile. Elements held mobile dig foxholes in their assembly areas.

c. If covered lateral routes permit the shifting of light and heavy machine guns, the bulk of these weapons may initially be located well forward where their fire power will delay the hostile advance while the rifle companies (less their light machine guns) are being shifted to meet the main attack. If the terrain does not readily permit such forward use, machine guns are distributed in depth. If available, additional non-organic machine guns are procured and emplaced. 81-mm mortars are located to cover the principal avenues of hostile approach and are prepared to move rapidly to supplementary positions. Antitank guns may be initially emplaced on the more likely avenues of mechanized advance with their prime movers nearby, prepared to move to a threatened area. Cannon company weapons are usually held under regimental control; if attached or in close support of the battalion they are held mobile in a central location prepared to move to previously selected firing positions. Artillery concentrations and normal barrages are planned to cover the front and flanks of each battalion defense area that is organized.

d. Early information of the direction of the hostile advance is essential. Patrols furnished with rapid means of communication, including voice radios, are pushed well to the front and flanks.

235. DEFENSE IN WOODS. *a.* Defense in woods is characterized by short fields of fire and lack of observation. To cope with these conditions, reliance must be placed on closely coordinated defensive fires of riflemen and automatic riflemen, antipersonnel mines, constant patrolling, extensive use of local security groups, and the preparation of routes for rapid shifting of reserves.

b. Limited fields of fire within the position necessitate reduction of distances and intervals between individuals and units. Company supports and the battalion reserve will be

held mobile; counterattack plans will be prepared. Forward platoons also may hold a squad or half-squad mobile for local counterattack or to deal with infiltrating groups.

c. There will be little or no opportunity for long-range machine-gun fires. Guns whose mission is not close support of the main line of resistance are, therefore, initially sited well forward to limit penetrations and protect the flanks of the forward elements of the battalion. Supplementary positions are prepared. Fire lanes are cut to lay down bands of machine-gun fire along the front and flanks of organized areas. Terrain restrictions sometimes make it necessary to employ machine guns singly, rather than by section. (See FM 7-15.) The 81-mm mortars are emplaced in openings in the woods or openings are cut to make firing possible. Every opportunity is taken to register fires before contact.

d. Antitank weapons and mines are placed so as to cover roads or other likely avenues of armored advance. (See FM 7-35.)

e. Elements of the cannon company supporting the battalion are held in positions from which they can give close support to the main line of resistance and counterattacks, or fire into penetrations. (See FM 7-37.)

f. Plans should be made for the supporting artillery to cover avenues of approach by defensive concentrations which can be fired without observation.

g. Constant patrolling is maintained to the front, flanks, and within the position. Local security groups are equipped with rapid means of communication, including voice radios, in order to give immediate warning of hostile advance.

h. Successful defense depends upon vigilance, accurate surveillance of hostile movements, close defensive fires, hand-to-hand combat, rapid counterattack, and the mopping up of groups which infiltrate the position.

236. DEFENSE IN JUNGLE. *a. General.* Jungle varies in denseness according to locality. In general terms, it may consist of any combination of open sabanas, usually with high grass, cultivated plantations, light jungle, or impenetrable jungle traversable only by circuitous established trails. The

topography also varies between relatively flat coastal plains, some with inlets or swamps and inland plateaus, through broken and extremely hilly areas to difficult mountain ranges and peaks. (See also par. 164.)

b. Principle of defense. (1) *General.* In light jungle, the principles of defense as outlined in Defense in Woods are applicable. (See par. 235.) Consideration should be directed, however, to adjoining areas that may contain dense jungle, and hidden obstacles which may influence the capabilities of the enemy and our own contemplated operations. Thorough and continuous ground reconnaissance is indispensable because of the limited effectiveness of security elements and the high degree of concealment from air observation afforded the enemy by even light jungle. Dense jungle imposes severe limitations on the defensive use of weapons because observation is often limited to a few yards. These factors, along with the restriction of maneuver and control, place the highest premium on planning, coordination, and small-unit leadership.

(2) *Selection of terrain.* Judicious selection of terrain is, to a high degree, vital to the success of the defense. High ground often has lighter jungle than low ground, thus affording increased visibility and fields of fire, as well as better communications and ability to maneuver. The dense jungle in the low ground constitutes a substantial obstacle to the enemy and canalizes his approach. The control of a series of key points substantially denies the enemy possession of the area because his power to maneuver, supply lines, and communications are so highly restricted, and his supporting weapons are of such relatively small value due to lack of observation, mobility, and masking. (See fig. 17.)

(3) *Organization of the ground.* Defense of important rear area installations, such as airfields and supply depots generally requires a continuous main line of resistance. Advantage is taken of ridge lines, series of hills, and the less dense portions of the jungle on which to establish this line. Fields of fire, which at best may be extremely short, are cleared as required. A linear defense of the front line is indicated, as opposed to the thoroughly organized de-

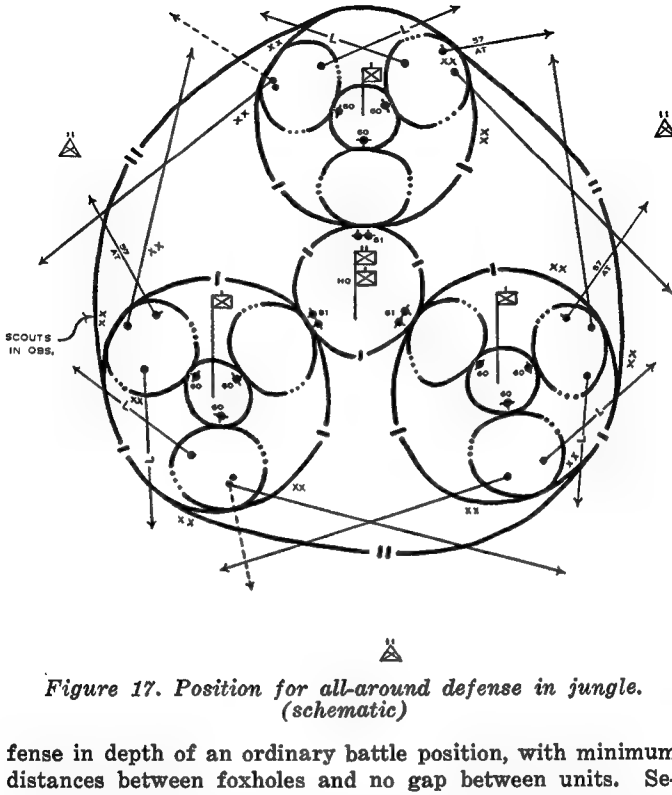

Figure 17. Position for all-around defense in jungle. (schematic)

fense in depth of an ordinary battle position, with minimum distances between foxholes and no gap between units. Security elements are not necessarily placed to the front, with the exception that substantial groups, dug in for all-around defense, may cover trails and other approaches to the position to delay the enemy and give warning of his approach. Lightly equipped and experienced patrols, with specific missions, should frequently be sent considerable distances to the front, using existing trails. Warning of an impending attack by large enemy patrols or in force is conveyed principally by ear and augmented by illumination from flares. Full use is made of the jungle as an obstacle; in addition artificial

obstacles such as barbed wire, booby traps and trip flares are used liberally. Most of the machine guns, particularly the heavy guns, are sited on the front line for maximum flanking fire. Automatic rifles are sited to supplement the machine guns and fill in the gaps. The supporting mortar primary target areas and artillery normal barrages are plotted and registered to establish a curtain of fire across the front on the edge of the safety limit. Planned concentrations are used to destroy enemy advancing or forming on trails and areas to the front of the position. Enemy patrols are repulsed by the use of grenades and close combat if they reach the foxholes, since the firing of weapons at vague targets will disclose the position and draw immediate fire. Supports and reserves should be small and close to the main line of resistance, dug in for all-around defense, and sufficiently alerted for their own defense against infiltrating enemy troops, and instant employment in case of a penetration. Command posts and other installations must be protected within these all-around defense areas. Maximum use should be made of wire communication to limit movement of individuals and maintain contact within the defensive position. The normal limitations of radio in jungle operations make it a secondary means of communication.

c. Independent units. The selection of terrain is still paramount for independent units which must defend. Key points or other suitable ground will be organized for all-around perimeter defense. The type of organization applies to units of all sizes, from a small group up to, but seldom exceeding, a battalion. Security measures, use of patrols, the emplacement and siting of automatic weapons, and the use of concentrations and barrages are similar to those employed in the case of a cordon defense of the main line. Supports and reserves, dug in for all-around defense within the perimeter, and with small, but well trained, patrols operating within the perimeter, are also employed. Insofar as the terrain permits, perimeters or key points should be mutually supporting by all types of fire, so that units not being hard pressed may assist others by fire support, and in case a key point is taken by the enemy, make his position untenable by the concentrated fire

of all weapons. This mutual fire support requires careful prior planning and coordination. The integrity of a perimeter defense is to a large degree predicated upon its supply, particularly of food, water, and ammunition. Armed escorts will be provided from reserve elements for the protection of supply details, the size depending upon enemy activity. Emergency supply or supply over long distances may be effected from parachute dumping by air transport.

237. DEFENSE IN TOWNS. *a.* The built-up portions of towns canalize the hostile attack along the streets approaching the position, but permit small enemy groups to work unobserved through or over buildings.

b. If the main line of resistance is along a street, close defensive fires are coordinated on that street. Barricades for machine guns are constructed in entrances to buildings or other localities sufficiently removed from street intersections to be out of the line of fire directed down the approaches. Mortar and artillery fires cover approaches to the position. Long-range machine-gun fires are obtained from elevated positions in buildings. Antitank guns are sited to cover street intersections.

c. The bulk of the troops on the main line of resistance occupy positions on the ground or lower floors of buildings. Snipers are posted in upper stories. To provide adequate fields of fire, open areas within the town are defended from the near side. Reserves organize rear positions across lateral streets parallel to the main line of resistance to add depth to the position and provide flank protection. Concealed routes for counterattack are obtained by cutting passageways through buildings, where necessary. (See FM 31-50.)

d. Each unit is assigned a clearly defined area of responsibility. These areas must be so located that they are mutually supporting and capable of all-around defense. Supporting weapons such as 57-mm antitank guns, machine guns, and 60-mm mortars are normally attached to the rifle platoon within whose area they are located. (See FM 7-35.) If other weapons such as 105-mm howitzers, 81-mm mortars or 4.2 chemical mortars are attached to front-line companies, they are usually held under company control. (See FM 7-37.)

238. DEFENSE OF A RIVER LINE. *a. General.* (1) *Battalion defending a normal frontage.* (a) Where the river is an effective barrier and the terrain is suitable for the development of close defensive fires, the main line of resistance is placed on the near bank of the river and the defense is organized as in any other comparable terrain.

(b) If the banks of the river are heavily wooded and time does not permit extensive clearing of fields of fire, or if the terrain at the river bank is otherwise unsuited for close defensive fires, the main line of resistance may be withdrawn from the river in order to obtain improved fields of grazing fire. The line must be close enough to the river (500 yards) so that the near bank can be adequately covered by rifle and machine-gun fire. If the banks are steep, and dead space exists, they may be covered by mortar fire, and/or detachments posted at the top of the bank.

(2) *Battalion defending a wide frontage.* The defense of a river line where extremely wide frontages have been assigned, corresponds to the defense on a wide front on other similar terrain. The near bank of the river is lightly held by outguards equipped with automatic weapons. The battalion, less detachments, is held mobile prepared to occupy previously prepared positions to block the most likely hostile crossing points. The battalion reserve is prepared to counterattack to deny the enemy a foothold on the near bank.

b. Antitank defense. The antitank platoon is usually held mobile in the rear area of the battalion. Unless the enemy is known to possess amphibian tanks, no antitank guns are emplaced on the river bank, since tanks will usually not be ferried until other hostile troops establish a bridgehead.

c. Covering forces. If the main line of resistance is on the near bank the combat outpost is located across the river. If the main line of resistance is withdrawn from the near bank the combat outpost may be located on the near bank and send its patrols across the river.

d. Demolitions. All means of crossing the river are removed or destroyed. Bridges are completely demolished so that a crossing cannot be made on the wreckage. Fords are

destroyed or rendered impassable with obstacles. The withdrawal of covering forces is carefully coordinated with the work of demolition crews.

e. Signal communication. Rapid dissemination of information and transmission of orders is essential to successful defense. Reliance is not placed upon any one means of communication to the exclusion of others. Combat outposts and patrols should be provided with voice radios.

f. Fires. In addition to its defensive fires the supporting artillery should be requested to prepare fires on portions of the river that are suitable for ferrying operations and bridge construction.

Section V

DEFENSE AGAINST AIRBORNE OPERATIONS

239. NATURE OF ATTACK BY AIRBORNE TROOPS. *a. General.* (1) Airborne troops will ordinarily be employed by the enemy on missions essential to the success of the operation as a whole, and not on missions which will influence only a local issue. They may be used as a spearhead to facilitate the breakthrough of ground forces by paralyzing communications and disrupting the movement of reserves to the threatened point through the seizure of important bridges or other defiles. When so used, they will strike suddenly and in sufficient numbers to assure reasonably the successful accomplishment of their mission. Although their objectives will usually be deeper in the defender's territory than areas held by front-line battalions, adequate close-in defensive measures must be taken by the latter to protect important battalion installations. For local security of the battalion command post against such operations, see paragraph 45.

(2) Troops landed by parachute and glider cannot long sustain combat unaided because of the nature of their equipment and the limited supplies initially landed with them. Large-scale attacks by such troops will usually be made to seize control of a bridgehead, local airfield, beachhead, or other locality whose seizure will permit the rapid landing

of reinforcements. This section deals with defense against this type of operation.

b. Conduct of the attack. (1) The air attack may be divided into four phases:

(a) Air reconnaissance.

(b) Aerial bombardment.

(c) Attack by airborne troops.

(d) Reinforcement.

(2) The attacker seeks to locate areas favorable for landings and to determine the defenses of those areas. Parachute troops can land almost anywhere, but gliders and transport planes require open areas. It is to be expected that extensive aerial photographs of the operational area will be taken prior to the attack. After locating the organized positions of the defender, the attacker may subject the defenses to an intense bombardment to soften up or destroy them. Airborne attackers may drop on their objective or at a short distance therefrom, and attempt to seize it by fire and maneuver. As soon as a base has been captured, the enemy may be expected to push in reserves and supplies by all available means.

240. PRINCIPLES GOVERNING THE DEFENSE. *a. During hostile reconnaissance.* In order to defeat air reconnaissance, concealment and camouflage are perfected to the highest degree. Alternate positions for weapons and men are dug so that the defense is flexible and elements can be shifted without loss of effectiveness. The ideal to be attained is never to be in the same exact location on two successive days. Extensive dummy positions are contructed for deception.

b. During aerial bombardment. During the bombardment, troops take cover, fire on low-flying hostile planes on orders of subordinate leaders, and hold themselves in readiness to meet an attack. If movement is essential during the bombardment, it should be done quickly in dispersed formations, and by covered or concealed routes.

c. During hostile landings. (1) The defenders endeavor to destroy the attackers immediately after the landing is made. All defending troops in the vicinity of the landing will im-

mediately offer aggressive resistance, regardless of their own numbers, or the magnitude of the hostile attack. Units already on the ground possess a temporary superiority in combat power over those just landed or attempting to land. The defending commander must guard against having his mobile forces lured too far away from the main enemy objective by landings spaced and timed for that purpose, or by the dropping of dummies by parachute.

(2) The attacker's aircraft can render but slight close support to his landing groups until these have effected a considerable degree of reorganization and assembly, since their exact dispositions will not be known to his air units.

d. Counterattack. Should the attacker succeed in gaining his objective and in landing reinforcements the defender must drive him out and regain the lost area. Depending upon the situation and the size and composition of the defending force, the local battalion commander may either launch an immediate counterattack or occupy a defensive position to block the hostile advance and form a base for counterattack by a larger element of the force charged with the defense of the area.

e. Armored vehicles. During the initial phase of the attack, airborne troops are particularly vulnerable to counterattack by armored vehicles. The defender should employ all available armored vehicles immediately without extensive reconnaissance to destroy gliders or other aircraft and landing groups as soon as possible after the landing is made.

241. CONDUCT OF THE DEFENSE. *a. General.* Since parachute troops can land almost anywhere, it will usually be impracticable to dispose defending troops so that they can bring coordinated fire to bear on enemy troops as they descend; however, plans should provide for an immediate counterattack. Careful reconnaissance for firing positions, routes available in the area, provisions for a mobile reserve(s), establishment of an adequate warning system with observation and surveillance of the entire area, and preparation of defensive works, including concealment and camouflage, are essential. It is particularly important that plans of fire and

maneuver be prepared and rehearsed so that different friendly elements do not fire into one another. Depending upon the size of the area to be defended against airborne attack, its road net, and available transportation and communication facilities, the battalion commander may hold the bulk of his forces mobile with an adequate warning system established, or he may assign small, fixed defensive groups to the more important areas, holding out one or more mobile reserves; or he may divide his entire battalion into fixed, mutually supporting groups and assign a group to each of the more important areas.

b. Motor transport. Motor transport is essential for the reserve elements and in some cases for the fixed groups. Vehicles should not be pooled; they should be distributed and concealed near each element of the reserve. Motor patrols are necessary as an adjunct to the warning system and should operate 24 hours a day.

c. Signal communication. Rapid communication between elements of the battalion and observation posts is essential. Wire communication, as well as radio, motor messengers, and pyrotechnic and other visual signals, is maintained to all elements.

d. Alertness. Alertness is required in all echelons. Observers in each unit are constantly on duty to give warning of air or ground attack from any direction. *It must be impressed upon each subordinate element that there is no "front" and that each unit must be prepared to strike swiftly and in any direction.*

Chapter 10

RETROGRADE MOVEMENTS

Section I

GENERAL

242. REFERENCES. For the fundamental doctrines covering retrograde movements, see FM 100-5. For principles governing retrograde movements of the infantry regiment and its smaller units, see FMs 7-10, 7-15, 7-35, 7-37, and 7-40. For the employment of tanks with infantry, see FM 17-36.

Section II

DAYLIGHT WITHDRAWAL

243. GENERAL. *a.* The regiment may be required to break contact with the enemy and withdraw, protected by a general covering force detailed by the higher commander (in addition to its own covering force), or it may be required to withdraw protected solely by elements of the regiment designated to cover the withdrawal. (For composition, placing, and conduct of the regimental covering force, see FM 7-40.)

b. A front-line battalion executes a daylight withdrawal from action by withdrawing each echelon under the protection of the next unit to its rear. (See fig. 18.) Each front-line company withdraws its forward platoons under cover of its support platoon. The front-line platoons execute their withdrawal by a thinning out of their lines while protecting themselves by the fire of automatic weapons left in position to be withdrawn with the last elements. These platoons will usually be assembled in rear of the battalion reserve (battalion covering force). The support platoons of front-line companies withdraw under the protection of the battalion reserve in the same manner as do the front-line platoons and rejoin their companies. If a regimental covering force is established to the rear, the battalion reserve withdraws under its protection. If no covering force has been established by higher headquarters, elements of the front-line companies may be placed temporarily in position in rear of the reserve

company to cover the withdrawal of the battalion reserves; otherwise front-line companies move to a battalion assembly area (or initial phase line) as soon as assembled. Thus the battalion shoulders its way to the rear until contact is broken and the battalion can be re-formed.

c. In order to control the withdrawal of the forward battalions, the regimental commander may assign zones of withdrawal and phase lines. When phase lines have been designated, the battalion commander designates the vicinity of the first phase line as the battalion assembly area; otherwise

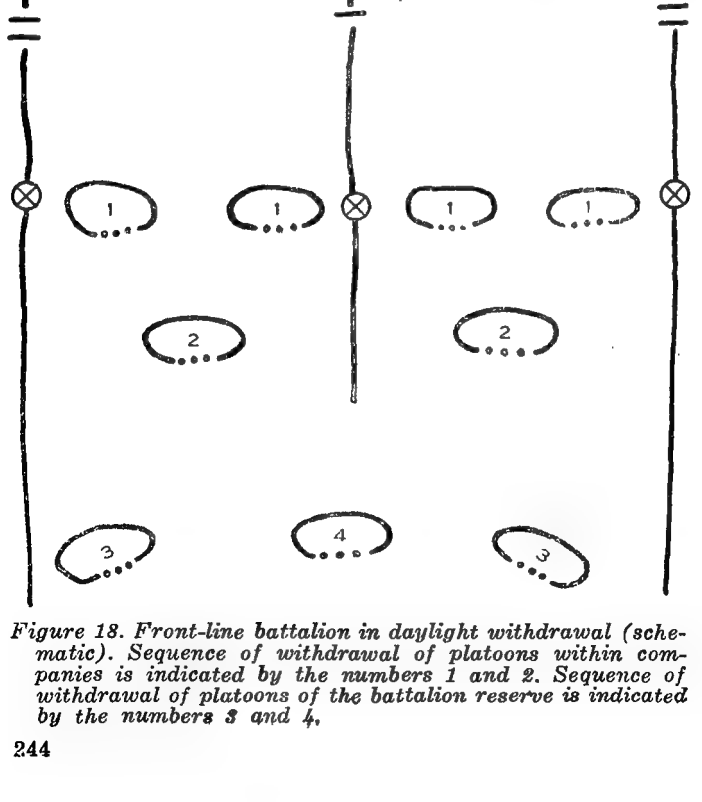

Figure 18. Front-line battalion in daylight withdrawal (schematic). Sequence of withdrawal of platoons within companies is indicated by the numbers 1 and 2. Sequence of withdrawal of platoons of the battalion reserve is indicated by the numbers 3 and 4.

he designates the first suitable delaying position in rear of the regimental covering force as the assembly area. Subordinate units move directly to this position, and occupy it as for delaying action. Further movement to the rear is executed as directed by the regimental commander.

244. PLANS AND ORDERS OF A FRONT-LINE BATTALION. *a. Reconnaissance.* The nature of the action usually precludes extensive reconnaissance. If practicable, a battalion staff officer reconnoiters and posts guides to direct the withdrawing elements to the battalion assembly area (or initial phase line). Subordinate units conduct such reconnaissance of routes as time permits.

b. Orders. The withdrawal orders of the battalion commander are brief, fragmentary, and oral. Such orders are usually transmitted by staff officers in order to avoid summoning the lower commanders whose units are engaged with the enemy. The battalion order includes the following:

(1) Composition and location of the battalion covering force.

(2) Attachment of elements of the heavy weapons company and antitank platoon to front-line companies.

(3) Time of withdrawal of each echelon.

(4) Zones or routes of withdrawal for each company.

(5) Location of battalion assembly area (or initial phase line).

(6) Route of withdrawal of battalion command post and successive locations.

c. Sequence of withdrawal. The sequence of a daylight withdrawal is usually the aid station group, headquarters company (less antitank platoon), front-line rifle companies, and reserve company. The front-line rifle companies may be echeloned in their withdrawal, beginning with the *least closely engaged;* however, they are usually withdrawn simultaneously.

d. Battalion supporting weapons. Supporting weapons located in the areas of forward rifle companies are attached to those companies for the initial phase of the withdrawal. Rear heavy machine guns may be retained under company

control or attached to the battalion covering force; if necessary, the forward guns may also be attached to the battalion covering force when they reach the area it occupies. The 81-mm mortars are withdrawn to the rear of the battalion to cover the withdrawal of the forward elements. One or more sections may be attached to the covering force. The battalion antitank guns are withdrawn with the forward companies and are then usually attached to the battalion covering force. Weapon carriers and antitank-gun prime movers are brought as far forward as practicable by infiltration.

e. Attached elements of cannon company. The regimental commander will usually attach to forward battalions any elements of the cannon company which are located in the areas of those battalions at the time the withdrawal is to be executed. Such elements are ordinarily attached to the battalion covering force, and withdraw with it. Regimental orders usually terminate the attachment of these elements to the battalion when the latter passes the area occupied by the regimental covering force.

f. Supporting artillery. When centralized control of the supporting artillery battalion is impracticable, a part (usually one light battery) is attached to each withdrawing infantry battalion. Whether attached or in support, the mission of the artillery is to insure the withdrawal of the unit it supports by remaining in position and continuing its fire support as long as possible.

g. Attached tanks. Tanks, by offensive action, may be used to aid the infantry in accomplishing a daylight withdrawal. Tanks located in concealed forward assembly positions can make offensive sweeps and thrusts against the exposed enemy thereby demoralizing his troops and disorganizing his attack.

245. CONDUCT OF THE WITHDRAWAL. Once begun, the withdrawal of a front-line battalion is conducted with all practicable speed to prevent the enemy from taking advantage of the situation. Fires of supporting elements of the cannon company and artillery and those of battalion supporting weapons are directed to interdict hostile movement into the gaps created by the withdrawal of elements of the

forward companies and employed to cover the withdrawal of those elements still in close contact. Smoke may be fired by these weapons or by supporting chemical troops to assist in the withdrawal.

246. SIGNAL COMMUNICATION. The battalion command post, operated by a skeleton crew, remains open in the old location until the forward rifle companies have passed the area of the battalion covering force. All other command post personnel and communication equipment move to the battalion assembly area with the first withdrawing echelon of the battalion, prepared to reopen upon battalion order. Wire communication is not established to the rear.

247. BATTALION AS A COVERING FORCE. When a battalion acts as the covering force of a larger unit, it has the mission of stopping, delaying, or diverting the advance of the enemy in order to permit the troops in contact to disengage, assemble, and move to the rear. Its initial position and the length of time this position is to be held are prescribed by the higher commander. A counterattack with a limited objective is frequently effective.

a. Supporting arms. Elements of the regimental antitank and cannon companies ordinarily are attached to the battalion. Units of the regimental intelligence and reconnaissance platoon, artillery, tanks, engineers, antiaircraft automatic weapons, tank destroyers, and chemical troops also may be attached.

b. Conduct. (1) The battalion organizes and defends the covering position in a manner similar to that employed in a delaying action. (See sec. IV.) The battalion commander coordinates the long-range fires of his supporting weapons with those of any larger general covering force established by higher authority.

(2) When its mission is accomplished, the covering force withdraws under cover of the fires of its own supporting weapons and reserve. It then forms the rear guard for the retiring force or, if aggressive hostile pursuit makes it necessary, occupies successive delaying positions to the rear.

Section III

NIGHT WITHDRAWAL

248. GENERAL. *a.* A front-line battalion executes a night withdrawal by the simultaneous withdrawal of all elements of the battalion, less troops left in place as a covering force. The success of the withdrawal depends upon careful coordination and secrecy. The withdrawal of troops and weapons, and their subsequent assembly, are conducted as quietly as possible. Troops of the covering force, by their fires and patrolling, simulate the normal activities of the battalion.

b. The regimental commander will usually attach to a front-line battalion all elements of supporting units located in its area for withdrawal to the battalion assembly area. Their further withdrawal will be as directed by regimental order.

c. Preparatory to a night withdrawal, tanks may attack late in the afternoon to confuse the enemy and disrupt his attack. They should then be withdrawn in rear of the general covering force. From this rear position the tanks can assist by fire the withdrawal of other troops and be used early next day for counterattack. Such counterattacks are limited objective attacks and must be strongly supported by artillery and infantry. It is seldom practicable to employ tanks during the actual time of withdrawal at night.

249. COVERING FORCE. *a.* The strength and composition of the battalion covering force may be designated by the regimental commander. The covering force usually consists of not more than one-third of the rifle strength of the battalion and such supporting weapons with skeleton crews as are required.

b. Normally, one rifle squad is left in place in the defense area of each platoon of the forward rifle companies. (See fig. 19.) As soon as the platoons have been withdrawn, personnel of the squad left in place by each front-line platoon distribute themselves to cover the most likely enemy approaches to the platoon area and afford close protection to supporting weapons. The support squad of each front-line company is used to eject hostile patrols entering the position and for local patrolling. One rifle platoon is usually left in

place in the battalion reserve area. It is responsible for patrolling, for protecting the covering-force command post, and for blocking the more likely avenues of hostile approach into the position.

c. One gun of each section of light or heavy machine guns emplaced in close support of the main line of resistance is attached to the covering force. If the terrain permits the firing of long-range fire missions by rear guns, one section of these guns may also be attached. Not to exceed one-half of the 81-mm mortars and of the 60-mm mortars of front-line companies are left in position to fire normal night missions.

d. One or more antitank guns may be left in position to cover those avenues of approach that can be traversed by hostile armored vehicles at night; however, such approaches

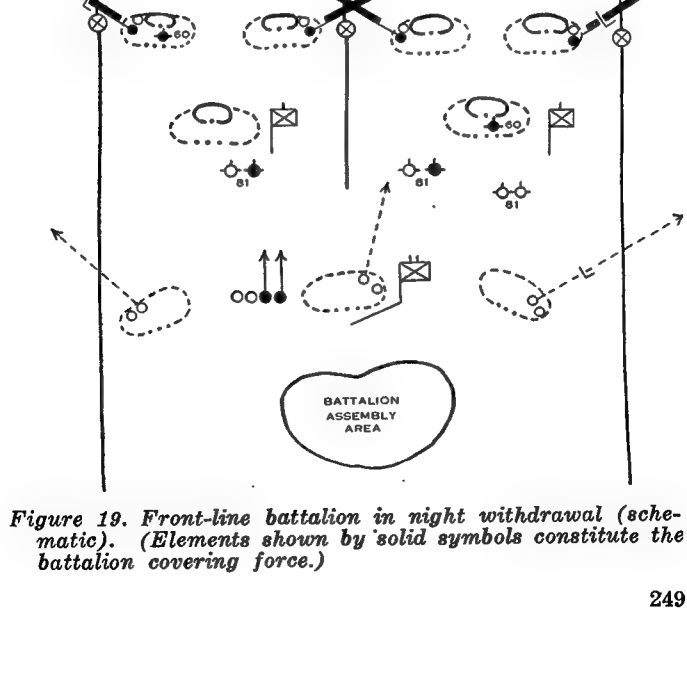

Figure 19. Front-line battalion in night withdrawal (schematic). (Elements shown by solid symbols constitute the battalion covering force.)

may be defended by personnel equipped with antitank rifle grenade launchers and rocket launchers, thus permitting the antitank guns to be withdrawn with the battalion.

e. The covering force commander (usually the battalion executive officer) normally takes over the battalion command post location with a skeleton operating crew, messengers, and the necessary wire and radio communication facilities. The regimental order will specify the medical personnel to remain with the covering force; each battalion may be required to leave part of its aid station group in place, or the regimental aid station may supply all medical facilities.

250. RECONNAISSANCE. If practicable, all units reconnoiter routes to their assembly areas during daylight. If the battalion is to organize and occupy a rear position following the withdrawal, the reconnaissance includes the rear position. Necessary guides are posted from each company. Reconnaissance groups are limited as to number and size, in order to preserve secrecy.

251. ORDERS. *a.* Warning orders are issued to company commanders as soon as the decision to withdraw is known. Such orders, as well as the details of the orders to be issued later, are transmitted by messengers, staff officers, or by the battalion commander in person. Company commanders and commanders of attached units whose units are in contact with the enemy are not assembled to receive orders. If wire communication has been established to companies, orders are not transmitted by wire if there is any possibility of hostile wire tapping. Withdrawal orders are *not* transmitted by radio.

b. The following outline indicates the matter, when appropriate, to be included in the battalion order:

BATTALION WITHDRAWAL ORDER

1. Any new information concerning enemy or friendly forces.
2. General plan for the withdrawal.
3. Instructions to subordinate units.

a. Location of battalion assembly area (usually designated by the regimental commander) and the forward assembly area of each company.

b. Routes and time of withdrawal for rifle companies and supporting and attached elements.

c. Composition of the battalion covering force to be left in position.

d. Designation of the covering force commander and the time he assumes command (usually just prior to the time the front-line companies initiate their withdrawal).

e. Attachment of elements of the heavy weapons company and battalion antitank platoon to rifle companies for their withdrawal.

f. Route and time of withdrawal of the covering force.

4. Administrative instructions and information.

a. Use of motor transport.

b. Ammunition supply for the covering force; for the withdrawing force en route, if necessary; and on any rear position.

c. Plan for evacuation of casualties.

5. Communication instructions.

a. Index to signal operations instructions in effect.

b. Restrictions, if any, on use of radio.

c. Special pyrotechnic signals.

d. Measures to deceive the enemy.

e. Present or future locations of command post or commander.

252. EXECUTION OF THE WITHDRAWAL. *a.* Front-line platoons withdraw under cover to the rear where they are assembled and moved to their company assembly areas. Upon assembly, each company moves directly to the battalion assembly area. The movement should be so timed and coordinated that there is no appreciable waiting in company assembly areas.

b. The regimental order may designate the forward limit of movement for motor vehicles, usually no farther forward than the first crest in rear of the main line of resistance. Vehicles are moved singly or in small groups and all movement is made without lights. Weapons emplaced in the areas of the forward rifle companies are attached to those companies for withdrawal to the location of the company vehicles where they are dispatched singly to the battalion assembly area. Sufficient motor transport is left with the covering force to move its supporting weapons.

c. All elements of the battalion (less the covering force) should arrive at the battalion assembly area in time for the battalion to move to the new position area in accordance with the regimental order.

253. SECURITY. The covering force provides the primary security for the withdrawal of the battalion. The battalion commander provides additional close-in security for movement of the battalion to the rear position it is to occupy or to the regimental assembly area. After the battalion has reached its position or rejoined the regiment, security measures are taken as directed by the higher commander.

254. SIGNAL COMMUNICATION. *a.* The battalion command post remains open in its old location until the battalion (less the covering force) leaves the assembly area. The time of displacement, route of movement, and new location of the battalion command post are announced in the battalion order. If the assembly area is inconveniently located with respect to the command post, a local line may be run to the assembly area to provide rapid communication with the covering force and with the regimental command post.

b. The covering force uses any wire lines already established in the old position. A skeleton crew remains at the old command post to operate it as the command post of the covering force. For purposes of deception the covering force maintains normal radio traffic. It employs pyrotechnics as prearranged signals and as an aid in simulating normal activity. Upon its withdrawal it cuts wire circuits, installs booby traps, and removes some of the wire to prevent use by the enemy.

c. During the movement of the battalion from the battalion assembly area to the rear, the battalion command post is with the marching column. Radio is silenced during this movement and in any new position the battalion is to occupy. Wire is not laid to the rear.

255. WITHDRAWAL OF COVERING FORCE. The regimental order specifies the time and route of withdrawal and the assembly area(s) of the covering force. If a rear position is to be occupied, the covering force is usually withdrawn in time to be brought by daylight under the protection of the outpost covering the rear position. The elements of the battalion covering force are usually withdrawn simultaneously. The battalion covering force commander protects his movement to the rear by detailing the necessary security groups. He is responsible for the protection of his assembly area, or of an entrucking area if motor transportation is furnished for movement to the new position area.

Section IV

DELAYING ACTION

256. GENERAL. *a.* The purpose of delaying action is to gain time while avoiding decisive action. Delay of an advancing enemy may be accomplished by offensive action, by defensive action in one position, by delaying action in successive positions, or by a combination of these methods. (See FM 100-5.)

b. This section deals principally with the battalion in delaying action in successive positions.

257. IN SUCCESSIVE POSITIONS AS PART OF A LARGER FORCE IN OPEN TERRAIN. When operating as a part of the regiment or larger force, the battalion is assigned a sector on the initial delaying position and a zone or route(s) of withdrawal.

a. Frontages. Units may be expected to conduct delaying action on frontages twice as great as in defense.

b. Distribution of rifle companies. (1) The battalion occupies the extended frontage by placing a greater number

of platoons on the line of resistance than in a sustained defense on similar terrain, and by allowing greater intervals between platoons. (See fig. 20.) If their flanks are secure, rifle companies assigned to the line of resistance may occupy their defense areas with three platoons abreast. Intervals between individuals and squads are not increased. Intervals between adjacent units must permit mutual support by fire.

(2) Whenever practicable, the line of resistance is located near a topographical crest to facilitate long-range fire and provide immediate defilade for withdrawal to the next delaying position.

(3) The size of the battalion reserve will vary from a part of a rifle company to a complete company reinforced by infantry supporting weapons. It has the mission of securing the flanks and covering the withdrawal from the line of resistance. Factors to be considered in determining the size of the reserve component are the necessity for flank protection and whether the contemplated withdrawal is to be made during daylight or at night.

(a) *Security of flanks.* If the terrain or disposition of other friendly troops are such that the flanks of the delaying force are relatively secure, it will tend to decrease the requirements for a reserve. Conversely, if the delaying force is threatened by an envelopment, a strong reserve must be provided.

(b) *Time of withdrawal.* If the withdrawal of the delaying force is to be made at night, a small reserve may suffice. However, if the withdrawal is to be made during daylight, it is necessary to hold out a reasonably strong reserve to act as a covering force for the withdrawal of the forward elements.

(c) *Reserve held mobile.* The reserve will usually be held mobile in an area from which it can be moved quickly to block any attempt of the enemy to envelop the position, to cover the withdrawal of the troops on the line of resistance, or to protect the routes of withdrawal.

c. Distribution of supporting weapons. All supporting weapons are initially placed well forward. Heavy machine

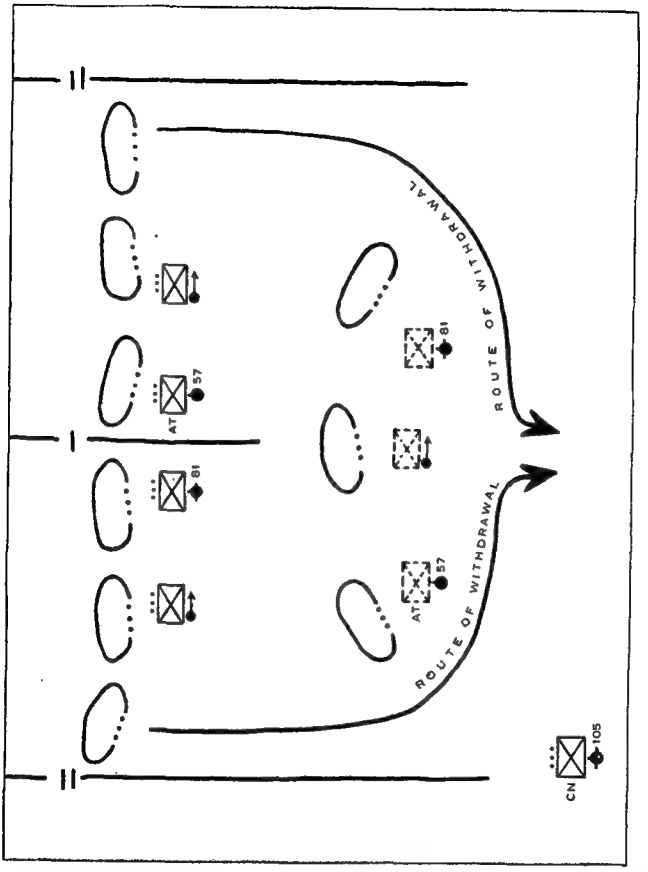

Figure 20. Battalion in delaying action (schematic).

guns may be located on the line of resistance. Initially, 81-mm mortars may be assigned position areas behind the first crest in rear of the line of resistance. If practicable, firing position areas for the antitank guns may be located near topographical crests, with nearby cover positions selected for prime movers to facilitate withdrawal. (See also

par. 216.) Antitank guns and cannon company howitzers may be required to move laterally to threatened areas. (See also par. 260.) Weapons that are to be withdrawn with rifle units are attached to those units. Company vehicles are retained as close as practicable to the weapons in order to facilitate the withdrawal. Ammunition is kept on trucks; only those amounts estimated to be required for immediate missions are placed at the gun positions.

d. Battalion covering force. The reserve constitutes the covering force, and is placed in position to facilitate its employment for flank protection, to assist in extricating forward units, and to act as a buffer to cover the withdrawal. Once the withdrawal of the battalion is successfully under way, the reserve becomes the rear guard for the battalion and may be required to continue on such duty as long as the enemy maintains direct pressure; it then constitutes the outpost for the next delaying position.

e. Conduct of delaying action. (1) A battalion commander seeks to force the enemy off roads and slow down his advance by the use of obstacles and long-range fires; stop the advance of his security elements by a heavy volume of fire; and force him into time-consuming preparations for attack. Mines are extensively used to block roads and defiles. Supporting weapons (machine guns, mortars, cannon company howitzers, and artillery) open fire at maximum effective ranges; riflemen and automatic riflemen open fire on hostile security elements at long ranges. Heavy weapons on the line of resistance frequently open long-range fire from primary positions, since the location of the line of resistance near a topographical crest usually does not permit the use of supplementary positions removed from that line, and concealment of positions of weapons is less important than in the sustained defense.

(2) Tanks can be used to aid the infantry in delaying action by direct fire from hull defilade, by indirect fire in assisting the artillery, by a quick direct thrust into the advancing enemy, or by a surprise flank attack across the routes by which such a force is advancing. Such attacks must be strongly supported by the artillery and by the

heavy weapons company. The tanks will usually be attached to the infantry unit they support. Their primary mission is to attack a hostile force before it can endanger the withdrawing elements of the delaying force. When terrain in front of the delaying position is unsuitable for tank action, the tanks withdraw to a reserve position from which they may counterattack. From this reserve position they may also be used to reinforce the artillery fires. The infantry battalion commander acquaints the tank unit commander with the situation and plan, and receives the tank commander's recommendation. Orders should designate the objectives for the tanks and contain necessary details for coordination and cooperation between the infantry and tanks. The infantry heavy weapons and artillery must neutralize hostile antitank weapons during the tank attack.

f. Withdrawal. (See Sections II and III above.) The withdrawal of the battalion may be commenced on order of the delaying force commander or on prearranged signal; it is coordinated with the withdrawal of the other elements of the delaying force by the delaying force commander. The delaying force commander orders the withdrawal before the enemy reaches a position from which he can launch a decisive assault. Forward units withdraw on designated and previously reconnoitered routes to company assembly areas. The withdrawal to the next delaying position may be either by battalion or companies. Companies may be withdrawn by separate routes if the road net is adequate. Intermediate positions covering defiles, road blocks and demolitions, or other terrain permitting delay by small units are designated by the battalion commander and occupied by cannon company, antitank, and machine-gun elements protected by small rifle groups. Such groups withdraw in time to avoid capture. The reserve covers the initial withdrawal of the battalion. It counterattacks when necessary to disengage the forward companies. It then protects the movement of the battalion to the next delaying position.

g. Action on rear delaying positions. The battalion commander initiates early reconnaissance of successive delaying positions and routes of withdrawal. The occupation of suc-

cessive positions and the action on those positions are similar to the occupation of and action on the first delaying position.

h. Supply and evacuation. (1) Ammunition, except that required for immediate needs, is kept mobile on vehicles of units in the delaying force. Limited additional stocks may be placed along withdrawal routes or on successive delaying positions; however, excess amounts must be avoided to preclude the necessity for abandonment. In the event abandonment of ammunition becomes necessary, its destruction must be effected to prevent capture by the enemy.

(2) Prompt evacution of casualties is essential. Casualties should be evacuated as they occur. Aid stations must be evacuated prior to withdrawal. Combat trucks and personnel may be assigned to aid in evacuation. If the facilities for the evacuation of casualties are insufficient, S-4 should request through channels the attachment of ambulances and personnel from the collecting company serving the regiment. If facilities are still insufficient to evacuate all casualties, it may be necessary to abandon some of them; such action is a command decision. Sufficient medical supplies and personnel must be left with the abandoned casualties.

i. Signal communication. The battalion command post is assigned an initial location similar to that of a front-line battalion in defense. (See par. 208.) The command post remains open until the forward units have initiated their withdrawal. It then marches with the battalion or, if companies are ordered to withdraw by separate routes, with one of the companies.

258. INDEPENDENT DELAYING ACTION IN SUCCESSIVE POSITIONS IN OPEN TERRAIN. When the battalion conducts delaying action independently, its action is similar to that of a regiment operating as an independent delaying force. (See FM 7-40.) Rifle companies and supporting weapons are distributed, a covering force is constituted, and withdrawal is executed as indicated in paragraph 245. When the enemy launches his coordinated attack in superior strength, the battalion ordinarily withdraws

without accepting close combat. The withdrawal to the next delaying position should commence before enemy rifle fire becomes effective, usually at about 500 yards. However, when the mission and situation permit, defense of the initial position, or of any successive position, is prolonged in order to take advantage of darkness to cover the withdrawal.

259. IN SUCCESSIVE POSITIONS IN CLOSE TERRAIN. *a.* When operating as a part of the regiment or larger force in delaying action in close terrain, the battalion is usually assigned the mission of delaying on one or more avenues of hostile advance. (See FM 7-40.) Successive positions to the rear to be reached at stated times are prescribed by the regiment to assure coordination and periodic resumption of control of the regiment. In other respects the action of the battalion is independent.

b. In close terrain, lack of observation increases the difficulties of coordination and control by all units, but facilitates surprise. In densely wooded areas, the action will be executed principally on or near trails. Delay is effected by surprise fire from concealed riflemen and automatic weapons placed to sweep trails or roads or to deliver flanking fire upon them, preferably in areas which make it difficult for the enemy to leave the roads or trails and which force him to make time-consuming detours to outflank the defenders. Local attacks against the hostile flanks may also be employed where conditions are favorable.

c. The battalion does not accept close combat; the withdrawal is so executed as to avoid being outflanked or enveloped, and in time to reach the next delaying position by the time prescribed by the regimental commander.

d. For delaying action in jungle warfare, see FM 72-20.

260. CANNON COMPANY WEAPONS AND ARTILLERY. *a.* One or more cannon platoons are normally attached to a battalion conducting a delaying action. If practicable, position areas should be such that firing positions may be located near topographical crests, with nearby cover for prime movers to facilitate withdrawal. Fire is opened on

hostile elements at the longest practicable range in order to disorganize and delay the hostile approach. During the withdrawal from one delaying position to another, cannon elements, protected by riflemen, may occupy intermediate positions to harass the enemy, slow down his advance, and cover road blocks and other obstacles. (See FM 7-37.)

b. The artillery is placed well forward behind the first main position to permit long-range fire. If a daylight withdrawal is anticipated, the artillery is disposed in depth, with some of it in rear of the next position. Each delaying position should be located to provide adequate ground observation for the artillery. Under conditions which would make close support by artillery held under regimental control impracticable, one or more batteries may be attached to the battalion. (See FM 6-20.)

c. The battalion commander employs the fires of cannon company weapons and artillery, whether attached or in support, to assist in delaying the enemy by long-range fires, and to provide close support during the withdrawal of all elements of the battalion.

261. DELAY IN ONE POSITION. The mission and terrain may require that the enemy be delayed from one position. If the period of time the enemy must be held beyond a certain line is such that the delaying force may be required to accept close combat in order to accomplish its mission, the position will have to be organized in greater depth and with stronger reserves than is necessary when the delay can be accomplished from successive positions. The line of resistance is selected, the position organized, and the action conducted so as to disorganize the enemy and delay his advance. If the situation requires the withdrawal of the battalion with the enemy in close contact, the withdrawal is conducted according to the principles of withdrawal of a front-line battalion described in paragraphs 245 and 252. Delay from one position will be accomplished only when the tactical situation prohibits the use of successive positions.

	Paragraphs	Pages
Adjutant	10, 40, 45, 47, 108	8, 24, 27, 75
Administration, Headquarters company	51	32
Advance guard:		
Bivouac outpost	110	77
Day march	97, 102	60, 69
Night march	104	70
Ammunition and pioneer platoon. (*See* Platoon)		
Ammunition supply point. (*See also* Supply, Class V.)	18, 92, 185, 209	13, 52, 171, 190
Antiaircraft security	47, 69-71, 73, 98, 99, 109-111, 119, 123, 129, 135, 186, 223, 231	29, 41-42, 43, 60, 61, 76-79, 87, 89, 94, 101, 172, 213, 230
Antimechanized defense	47, 62-72, 98-101, 109-111, 119, 123, 125, 129, 133, 135, 142, 157, 185, 216, 218, 219, 223, 231, 235	29, 38-43, 60-67, 76-79, 87, 89, 91, 94, 100, 101, 117, 138, 171, 198, 202, 203, 213, 230, 232
Antitank platoon. (*See* Platoon, antitank.)		
Approach march	113-125	81-91
Artillery, supporting	122	88
Boundaries	115	83
Communication signal	121, 124, 125	88, 90, 91
Conduct	123	89
Control of motor vehicles	120, 124	88, 90
Formations	120	88
General	113	81
March objectives	116	83

	Paragraphs	Pages
Night	125	91
Orders	114	82
Phase lines	116	83
Rear battalion	124	90
Reconnaissance	118, 125	85, 91
Security	119	87
Zone and direction of advance	115	83
Assembly areas	126, 129	93, 94
Assignment of area	127	93
Daylight withdrawal	243, 246	243, 247
Defense	210, 215, 229, 231	191, 195, 228, 230
General	126	93
Night attack	157	138
Night withdrawal	252, 255	251, 253
Occupation	128	94
Reconnaissance	128	94
River crossing	181	168
Security	129	94
Attack	130-205	96-187
Advance through hostile position	146	128
Against an organized position	131	96
Against discontinuous resistance	131	96
Assault	145, 159	127, 149
Attack positions	135	101
Beachheads	200-205	185-187
Boundaries	135	101
Communication, signal	139, 157, 188	114, 138, 174
Conduct of the attack	143	118
Consolidation of position	147	129
Direction	135	101
Formation	135	101
Fortified position	190-194	175-179
Jungle	164-168	156-158
Launching the attack	142	117

	Paragraphs	*Pages*
Line of departure	133, 135, 142, 157	100, 101, 117, 138
Main attack	132, 135, 141	97, 101, 116
Meeting engagements	131	96
Method	132, 158	97, 146
Night	155-159	135-149
Conduct	159	149
General	155	135
Objectives	157	138
Orders	158	146
Plan	155, 157	135, 138
Preparatory actions	156	137
Pursuit	148	130
Reconnaissance	156	137
Reserve	155	135
Objectives	135, 147, 157, 161, 163, 180, 184	101, 129, 138, 151, 155, 168, 170
Orders	140	114
Plan, formulation	134	101
Plan of maneuver	135, 141	101, 116
Plan of supporting fires	136	108
Pursuit	148	130
Raids	195-199	179-184
Reconnaissance	131	96
Reorganization	146, 147	128, 129
Reserve, use of	135, 143, 147, 148-154, 157, 162, 191, 193	101, 118, 129, 130-134, 138, 152, 176, 178
Reserve battalion	227-233	226-231
River line	173-189	162-174
Assembly areas	181	168
Communication, signal	188	174
Evacuation	187	172

	Paragraphs	*Pages*
Formation	178	166
General	173	162
Means	179, 189	166, 174
Movement to river	182	169
Objectives	180, 184	168, 170
Orders	176	166
Plans	175	164
Reconnaissance	174	163
Security	186	172
Supply	187	172
Support of initial crossing	185	171
Secondary attack	132, 135, 143	97, 101, 118
Security	135, 144, 157, 159, 162, 176	101, 127, 138, 149, 152, 166
Seizure of final objective	146	128
Supply:		
Class I (rations and water)	88	48
Class II (clothing and equipment)	89	51
Class III (gasoline and lubricants)	90	51
Class IV (fortification materials)	91	52
Class V (ammunition and pyrotechnics)	92, 138	52, 113
Towns	169-172	158-162
Woods	160-163	151-155
Zones of action	135	101
Aviation	136, 157	108, 138
Battalion headquarters and staff:		
Adjutant (S-1)	10, 32, 40, 45, 47, 108	8, 23, 24, 27, 29, 75
Ammunition and pioneer platoon leader	7, 16	6, 12
Antitank platoon leader	7, 16	6, 12
Artillery liaison officer. (*See* Field Artillery.)		
Cannon company representatives. (*See* Company, cannon.)		
Commander. (*See* Commander.)		

	Paragraphs	*Pages*
Commanders of attached and supporting units	5, 7, 20	5, 6, 14
Communications officer	7, 17, 40	6, 12, 24
Composition	2, 7, 8	1, 6, 7
Executive officer	9, 33, 35, 249	7, 23, 248
Headquarters section	52	32
Heavy weapons company commander	7, 15	6, 12
Intelligence officer (S-2)	11, 52	8, 32
Liaison officers	23, 124, 143, 161	16, 90, 118, 151
Motor transport officer	7, 14, 47, 124	6, 11, 29, 90
Operations officer (S-3)	12, 26	9, 20
Organization for combat	8	7
Supply officer (S-4)	13, 18, 19, 88, 92	10, 13, 48, 52
Surgeon	7, 19, 108, 187	6, 13, 75, 172
Battalion, Infantry, rifle:		
Composition and attachments	2	1
Mission and role	1	1
Beachheads	200-205	185-187
Bivouacs	107-111	75-79
Battalion as bivouac outpost	110	77
Battalion operating alone	111	79
Battalion within regimental bivouac area	109	76
Quartering party	108	75
Boundaries:		
Approach march	115	83
Attack	135	101
Daylight withdrawal	243	243
Defense	207, 214	189, 195
Cannon company elements	22, 99, 100, 129, 136, 157, 185, 217, 244, 260	16, 61, 66, 94, 108, 138, 171, 200, 245, 259

	Paragraphs	*Pages*
Chemical troops	100, 101, 136, 157, 185, 245, 247	66, 67, 108, 138, 171, 246, 247
Commander, battalion:		
Actions after issuance of orders	27, 142, 143, 151	21, 117, 118, 133
Actions upon receipt of orders	25, 128, 210, 233	18, 94, 191, 231
Characteristics	3	5
Estimate of situation	25	18
Exercise of command	3	5
Plan, completion of	25	18
Reconnaissance. (*See* Reconnaissance.)		
Relations with commanders of supporting units	6	6
Relations with staff	4	5
Relations with subordinates	5	6
Responsibility	3, 86, 92, 226	5, 48, 52, 225
Troop leading	24-29	17-22
Commanders of attached units	20	14
Command post, battalion	37-45	24-27
Approach march	124	90
Attack	139, 188	114, 174
Battalion commander operates from	27	21
Daylight withdrawal	246	247
Defense	233	231
Definition	38	24
Displacements	43	27
Establishment	41	25
Location	17, 40	12, 24
Night withdrawal	249, 254	248, 252
Operation	42	26
Organization	39	24
Security	45, 133	27, 100
Command posts, company	44	27

	Paragraphs	*Pages*
Communication platoon. (*See* Platoon, communication.)		
Communication, signal:		
Antitank platoon	66	39
Approach march. (*See* Approach march.)		
Attack. (*See* Attack.)		
Beachheads	204	187
Bivouac	109	76
Daylight withdrawal	246	247
Defense. (*See* Defense.)		
Delaying action	257	253
Means	57	34
Night attack	157	138
Night withdrawal	254	252
River crossing	188	174
Supervision	12	9
Company aid men. (*See* Medical section.)		
Company, headquarters. (*See* Headquarters company.)		
Company, heavy weapons (*See also* Antiaircraft security):		
Approach march	117, 123, 124	84, 89, 90
Assembly area	129	94
Attack	136, 142, 143, 147, 148	108, 117, 118, 129, 130
Commander	15	12
Composition	2	1
Daylight withdrawal	244, 247	245, 247
Defense	216, 219, 220, 228, 234, 235, 237	198, 203, 207, 226, 231, 232, 237
Delaying action	257, 258	253, 258
Night withdrawal	249, 251	248, 252
Company, rifle:		
Approach march	117, 123	84, 89

	Paragraphs	*Pages*
Attack	135, 142, 143, 147, 148	101, 117, 118, 129, 130
Composition	2	1
Daylight withdrawal	243	243
Defense	215, 216, 219, 220, 223, 234, 235, 237, 238	195, 198, 203, 207, 213, 231, 232, 237, 238
Delaying action	257, 258	253, 258
Night withdrawal	249, 252	248, 251
Composition of infantry battalion	2	1
Covering force:		
Approach march	118, 123	85-89
Daylight withdrawal	243, 244, 247, 249	243, 245, 247, 248
Defense	223	213
Delaying action	257, 258	253, 258
Night withdrawal	248, 249, 252, 253, 255	248, 251, 252, 253
Defense	206-241	189-241
Airborne operations	239-241	239-241
Ammunition supply	92, 222, 226, 232	52, 213, 225, 231
Artillery, supporting	217	200
Assembly area	210, 215, 229, 231	191, 195, 228, 230
Boundaries	207, 214	189, 195
Cannon company	217	200
Communication, signal	208, 219, 223, 238, 241	190, 203, 213, 238, 241
Conduct of the defense	225	219
Control of motor vehicles	222, 232	213, 231

	Paragraphs	*Pages*
Counterattack	215, 224, 225, 229, 230, 235-237, 240	195, 218, 219, 228, 232-237, 240
Depth	209, 215	190, 195
Distribution of elements	212, 215, 216, 219, 220	193, 195, 198, 203, 207
Fire plan	216, 217, 219, 225, 226, 241	198, 200, 203, 219, 225, 241
Frontage	209, 215, 234	190, 195, 231
Holding garrison	207, 227	189, 226
Jungle	236	233
Limiting points	207, 209, 214	189, 190, 195
Main line of resistance	207, 214-216, 235-238	189, 195-198, 232-238
Movement to battle position	210	191
Night dispositions	224	218
Orders	221	211
Organization of ground	220, 227	207, 226
Outpost, combat	207, 216, 219, 223, 238	189, 198, 203, 213, 238
Outpost, general	223	213
Plans	212	193
Reconnaissance	210, 211, 226	191, 225
References	206	189
Relief	226	225
Reserve battalion	227-233	226-231
Reserve, use of	207, 215, 216, 225, 241	189, 195, 198, 219, 241
River line	238	238
Security	207, 223, 224, 238	189, 213, 218, 238

	Paragraphs	Pages
Tanks, use of	218, 223, 225	202, 213, 219
Towns	237	237
Weapons, supporting	216, 228, 234	198, 226, 231
Wide front	234	231
Woods	235	232
Delaying action	256-261	253-260
General	256	253
Independent battalion	258	258
One position	261	260
Successive positions	257-260	253-259
Engineers:		
Advance guard	99	61
Attack	136, 143	108, 118
Attack of fortified position	191	176
Bivouac outpost	110	77
Daylight withdrawal	228	226
Defense	220	207
Flank guard	100	66
Night operations	104, 155	70, 135
Rear guard	101	67
River crossing	181-183	168-170
Entrucking	105	71
Evacuation	74-81, 177, 257	44-46, 166, 253
Extra ammunition	92	52
Field artillery:		
Advance guard	99	61
Approach march	122	88
Attack	136, 157, 185	108, 138, 171
Battery forward observers	21, 122	14, 88
Bivouac outpost	110	77
Daylight withdrawal	244, 245, 247	245, 246, 247
Defense	217, 235, 237, 238	200, 232, 237, 238

	Paragraphs	*Pages*
Delaying action	260	259
Flank guard	100	66
Liaison officer	7, 21, 122, 136, 217	6, 14, 88, 108, 200
Rear guard	101	67
Field orders	26	20
Administrative matters	91	52
Approach march	114, 125	82, 91
Attack	140, 156, 158, 160, 176	114, 137, 146, 151, 166
Daylight withdrawal	244	245
Defense	221	211
Night withdrawal	251	250
Preparation	12, 26	9, 20
Flank guard:		
Day march	100, 102	66, 69
Night march	104	70
Fortified position, attack of	190-194	175-179
Gas officer	18, 52	13, 32
Headquarters company	46-71	29-42
Administration	51	32
Administration group, duties	48	31
Battalion headquarters section. (*See also* Battalion headquarters and staff.)	52	32
Commander. (*See also* Battalion headquarters and staff.)	10, 32, 40, 45, 47, 108	8, 23, 24, 27, 29, 75
Command group, duties	47	29
Company headquarters	46-51	29-32
Composition	2	1
Defense, priorities	220	207
Headquarters	46-51	29-32
March dispositions	49	31
Second-in-command. (*See also* Battalion headquarters and staff, motor transport officer.)	14, 47, 124	11, 29, 90

	Paragraphs	Pages
Training	47-50	29-31
Journal	26, 32	20, 23
Jungle warfare	164-168, 236	156-158, 233
Liaison officers:		
Artillery. (*See* Field artillery.)		
Battalion. (*See* Battalion headquarters and staff.)		
Line of departure	133, 135, 142, 157	100, 101, 117, 138
Maintenance, motor	14, 47	11, 29
Maps	36	23
Operation	12, 25, 26, 28	9, 18, 20, 22
Situation	9, 11, 12, 33, 52	7, 8, 9, 23, 32
Marches	96-105	60-71
Day	97-103	60-70
Advance guard	99	61
Battalion marching alone	102	69
Disposition, headquarters company	49	31
Flank guard	100	66
Main body	98	60
Rear guard	101	67
Motor	105	71
Night	104	70
Medical section	74-81	44-46
Aid station group	80	46
Commander	19, 108	13, 75
Company aid men	78	44
Composition	75	44
Duties of commissioned personnel	77	44
Evacuation	74-81, 177, 257	44-46, 166, 253
Expedients in theater of operations	81	46
Litter squad	79	46
Mission	76	44
Operations	2	1
References	74	44

	Paragraphs	Pages
Motor transport. (*See* Trains, and Transport.)		
Battlefield recovery	95	58
Destruction of vehicles	95	58
Motor march	105	71
Movements, rail	106	74
Movements, troop. (*See* Marches.)		
Observation post, battalion	11, 26, 52	8, 20, 32
Offensive operations. (*See* Attack.)		
Operations officer. (*See* Battalion headquarters and staff.)		
Orders. (*See* Field Orders.)		
Outpost:		
Assembly area	129	94
Bivouac	110, 111	77, 79
Combat	207, 216, 219, 223, 238	189, 198, 203, 213, 238
Delaying action	257	253
General	223, 255	213, 253
Overlays	36	23
Phase lines	116, 243, 244	83, 243, 245
Platoon, ammunition and pioneer	58-61	36-38
Commander	18	13
Composition	59	36
Duties of personnel	61	38
Functions	60, 101, 104, 117, 157	36, 67, 70, 84, 138
Operation	60	36
References	58	36
Platoon, antitank. (*See also* Antimechanized defense.)	62-68	38-40
Ammunition supply	68	40
Antimechanized warning service	70	41
Approach march	117, 119	84, 87
Attack	135, 142, 143	101, 117, 118

	Paragraphs	*Pages*
Platoon, antitank—Continued.		
Bivouac outpost	110, 111	77, 79
Commander	16	12
Communication	66	39
Composition	63	38
Coordination with other units	67	39
Daylight withdrawal	244	245
Defense	216, 219, 231	198, 203, 230
Delaying action	257	253
Leader	16	12
Missions	64	38
Night withdrawal	249	248
Readiness for action	65	39
Platoon, communication. (*See also* Communication, signal.)	53-57	32-34
Approach march	117	84
Attack	139	114
Commander	17	12
Defense	208	190
Message center section	54	33
Operation	53-57	32-34
Radio and visual section	56	34
Training	53	32
Wire section	55	34
Platoon, intelligence and reconnaissance, regimental:		
Advance guard	99	61
Bivouac outpost	110	77
Daylight withdrawal	247	247
Rear guard	99	61
Pursuit. (*See* Attack.)		
Quartering party	108, 128	75, 94
Raids	195-199	179-184
Rail movements	106	74
Rear guard:		
Daylight withdrawal	247	247
Day march	101, 102	67, 69

	Paragraphs	Pages
Delaying action	257	253
Night march	104	70
Reconnaissance	24	17
Approach march. (*See* Approach march.)		
Assembly area. (*See* Assembly areas.)		
Attack. (*See* Attack.)		
Daylight withdrawal	244	245
Defense. (*See* Defense.)		
Delaying action	257	257
Night withdrawal	250	250
Records, staff	31	22
Reserve battalion	149-154, 227-233	132-134, 226-231
Reserve, use of:		
Advance guard	99	61
Attack. (*See* Attack.)		
Bivouac outpost	110, 111	77, 79
Daylight withdrawal. (*See* Withdrawal.)		
Defense. (*See* Defense.)		
Delaying action	257	253
Pursuit	148	130
Retrograde movements	242-261	243-260
Ammunition supply	92, 257	52, 253
Rolls, individual	94, 147	57, 129
SOP. (*See* Standing operating procedure.)		
Security:		
Antiaircraft. (*See* Antiaircraft security.)		
Antimechanized. (*See* Antimechanized defense.)		
Approach march	119	87
Assembly area	129	94
Attack. (*See* Attack.)		
Command post	45, 135	27, 101
Defense. (*See* Defense.)		
Delaying action	257, 258	253, 258
Motorized elements:		
Advance guard	99	61
Ammunition supply	92	52

	Paragraphs	*Pages*
Rear guard	101, 102	67, 69
Night withdrawal	253, 255	252, 253
Reserve battalion	151	133
Signal communication. (*See* Communication.)		
Sketches	36	23
Staff notes	34	23
Standing operating procedure	26, 29	20, 22
Supply	85-95, 177, 257	47-58, 166, 253
Ammunition. (*See* Supply, Class V.)		
Class I (rations and water)	88	48
Class II (clothing and equipment)	89	51
Class III (gasoline and lubricants)	90	51
Class IV (fortifications materials)	91	52
Class V (ammunition and pyrotechnics)	60, 68, 92, 138, 150, 157, 187, 222, 226	36, 40, 52, 113, 132, 138, 171, 213, 225
Expedients	95	58
Means	87	48
Plan	13, 88, 92	10, 48, 52
Rations. (*See* Supply, Class I.)		
Responsibility	84	47
Tank support	57, 99, 100, 137, 142, 143, 145, 168, 201, 218, 223, 225, 230, 240, 244, 257	34, 61, 66, 112, 117, 118, 127, 158, 185, 202, 213, 219, 228, 240, 245, 253
Security against. (*See* Antimechanized defense.)		
Towns, combat in	169-172	158-162
Training:		
Headquarters Company	50	31
March	101	67

	Paragraphs	*Pages*
Trains, battalion	82-84	47
Ammunition supply	92	52
Bivouac	109, 110	76, 77
Composition	2, 82	1, 47
Control	13, 14, 120, 222, 252	10, 11, 88, 213, 251
Disposition on march	98, 99	60, 61
Duties of personnel	84	47
Mission	83	47
Transport, company:		
Ammunition supply	68, 92	40, 52
Bivouac	109, 110	76, 77
Components	2	1
Control	14, 92, 120, 124-126, 222, 232, 241, 252, 257	11, 52, 88, 90-93, 213, 231, 241, 251, 253
Disposition on march	98, 99, 101	60, 61, 67
Troop leading	24	17
Unit reports	35	23
Warning service and signal	70	41
Weapon carriers. (*See* Transport.)		
Withdrawal	243-255	243-253
Daylight	243-247	243-247
Communication, signal	246	247
Conduct	245	246
Covering force	247	247
General	243	243
Orders	244	245
Plans	244	245
Reserve, use of	243, 244, 247	243, 245, 247
Night	248-255	248-253
Communication, signal	249, 254	248, 252
Covering force	249, 255	248, 253
Execution	252	251
General	248	248

		Paragraphs	*Pages*
	Orders	251	250
	Reconnaissance	250	250
	Security	253, 255	252, 253
Woods		160-163, 235	151-155, 232